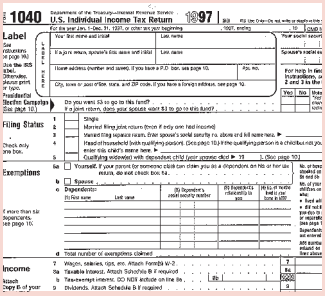
December 1998/AGO-257

AGRICULTURAL OUTLOOK



Statistical Indicators

Agricultural Outlook Forum Schedule

Economics Editor
Dennis A. Shields
(202) 694-5331
dshields@econ.ag.gov

Associate Editor
Anne B. W. Effland
(202) 694-5319

Managing Editor
Mary Reardon
(202) 694-5136

Assistant Editor
Carrie Ingoglia
(202) 694-5383

Art Director
Victor Phillips, Jr.

Statistics Coordinator
David Johnson
(202) 694-5324

Design, Layout, Charts
Cynthia Ray

Tabular Composition
Cliola Peterson

Published by the Economic Research Service, U.S. Department of Agriculture. Materials may be reprinted without permission. Current and back issues are available on the ERS website on the Internet at www.econ.ag.gov/epubs/pdf/agout/ao.htm

Contents have been approved by the World Agricultural Outlook Board and the summary released November 19, 1998. Price and quantity forecasts are based on the November 10, 1998 *World Agricultural Supply and Demand Estimates*.

Subscriptions: $65 per year ($130 to foreign address, including Canada). Order from ERS-NASS, 5285 Port Royal Rd., Springfield, VA 22161. Or call 1-800-999-6779 or 1-703-605-6220). Checks payable to ERS-NASS. For free email subscription (text only): Send message "subscribe agricultural-outlook" (no quotes or subject title) to usda-reports@usda.mannlib.cornell.edu

The next issue (AGO-258) is scheduled for mailing on January 4, 1999. If not delivered by January 21, call (202) 694-5383 (please have mailing label handy). The full text will also be distributed electronically; call (202) 694-5050 for further information.

Cover photo: Grant Heilman Photography

In This Issue . . .

Abundant Corn Harvest . . . Rail Service Update . . . Peanut Consumption . . . Indonesian Adversity . . . Uruguay Round Agreement

Large Supplies, Sluggish Export Prospects Pressure Corn Prices

U.S. corn farmers, now wrapping up the second-largest harvest in history, face weak prices in 1998/99. The large increase in corn supply is expected to outstrip the rise in demand, keeping downward pressure on prices. Although domestic use of corn will rise to a new record, only a small recovery in U.S. exports is likely. Global import levels are weak, despite low prices, because of economic and financial problems in several regions of the world. U.S. corn exports will remain comparatively low, although forecast to rally from the depressed performance of 1997/98 as competitor shipments decline.

The Western Rail Crisis: One Year Later

Rail service in the western U.S. appears to have improved substantially following a series of service failures which snarled traffic beginning in the summer of 1997. Steps taken by Union Pacific Railroad in response to last year's crisis, although slowing recovery in the short term, will add to overall rail capacity in the region for many years to come. Recent improvements should allow carriers to handle the 1998 grain and soybean harvest, which promises to be the largest in history. Bumper crops of grain and soybeans have combined with large carryin stocks to push grain storage capacity beyond its limits in many regions, but this fall's ground piles of grain are not the result of transportation snags. The large crops, worldwide economic problems, and increased competition have reduced demand for U.S. grain, particularly at Pacific Northwest ports.

U.S. Peanut Consumption Rebounds

Before the recent rebound in domestic food use of U.S.-grown peanuts, demand had weakened in the early 1990's. Stagnant commercial peanut use, rapidly falling government purchases, and rapidly rising volumes of imported peanuts and products had combined to reduce demand. But industry promotion efforts launched in 1996 have paid off, and while it is difficult to measure the impact, U.S. edible peanut consumption rose nearly 2 percent in 1997/98, to 2.17 billion pounds. Lower peanut prices and introduction of new products may also have helped boost consumption. While the issue of peanut allergies may cut into U.S. peanut consumption in the short run, the most immediate challenge for the U.S. peanut industry may be the recent appearance of peanut butter/paste imports from Mexico.

Indonesia's Crisis: Implications for Agriculture

Triggered by a regional financial crisis that began in Thailand in July 1997, Indonesia's sudden economic collapse in 1997-98 had several contributing factors, including a rapid increase in short-term, private debt and a weakly regulated banking system. The economic chaos has cut U.S. agricultural exports to Indonesia by more than half, from $639 million in January-September 1996 to $312 million during the same period in 1998. By itself, Indonesia is not a large market for U.S. agricultural exports, which totaled $57.2 billion in calendar year 1997. However, Indonesia and its ailing Southeast Asian neighbors, together with South Korea, accounted for 16 percent of the increase in U.S. agricultural exports from 1990 to 1996.

Uruguay Round Agreement on Agriculture: The Record to Date

During the 3 years since initial implementation of the Uruguay Round Agreement on Agriculture (URAA), the record is mixed. The Uruguay Round's overall impact on agricultural trade can be considered positive in moving toward several key goals, including reduction of agricultural export subsidies, new rules for agricultural import policy, and disciplines for sanitary and phytosanitary trade measures. The URAA has also encouraged a shift in domestic agricultural policies away from practices with the largest potential to affect production, and therefore, to affect trade flows. However, significant reductions in most agricultural tariffs will have to await a future round of negotiations.

The 1997 Tax Law: New Incentives For Farmers To Invest for Retirement

Recent changes under the Taxpayer Relief Act of 1997 offer new choices and opportunities for retirement planning at a time when farmers have a number of incentives for diversifying total assets beyond the farm. The tax law changes for Individual Retirement Accounts present new tax benefits, while lower capital gains tax rates reinforce farmers' traditional inclination to reinvest in farm assets to provide income at retirement. Although incentives in the new tax law are likely to increase overall investment, they will likely generate relatively little additional diversification into off-farm assets, given farmers' historical preferences.

Briefs

Specialty Crops

Sweet Potatoes Are No Longer Just Holiday Fare

Less-than-ideal weather across the major growing regions in the South this summer is expected to reduce supplies of sweet potatoes this holiday season and the rest of the 1998/99 marketing year. The decline is not likely to be severe, and grower and retail prices are expected up only modestly in 1998/99.

Sweet potatoes are traditionally associated with Thanksgiving, and shipments rise predictably every November as the holiday approaches. November typically accounts for about 20-25 percent of domestic shipments of sweet potatoes—a root vegetable that is rich in vitamins and minerals, low in fat and calories, and cholesterol-free. Shipments also increase during the holidays that follow (Christmas, Hanukkah, and the New Year), as well as around Easter. These major winter and spring holiday seasons together account for about 40-45 percent of domestic sweet potato shipments.

Although sales always shoot up during the holidays, consumers appear to be showing an increased interest in sweet potatoes throughout the year. In recent years, consumption of sweet potatoes during the summer (June-August) has increased significantly compared with the early 1980's. Summer sweet potato shipments averaged nearly 15 percent of the annual total in 1995-97, up from only 7 percent during 1980-82.

Year-round popularity is boosting overall per capita consumption of sweet potatoes and has helped reverse a declining trend. Per capita utilization averaged 4.6 pounds in 1994-97, up nearly 10 percent from the 1989-93 average. Per capita use had reached an all-time low of 3.9 pounds per person in 1993 following a slow and steady decline that began in the 1920's when sweet potato consumption was 29 pounds per person. Growing consumption of other vegetables, such as white potatoes in processed form, helped lower sweet potato consumption during this period.

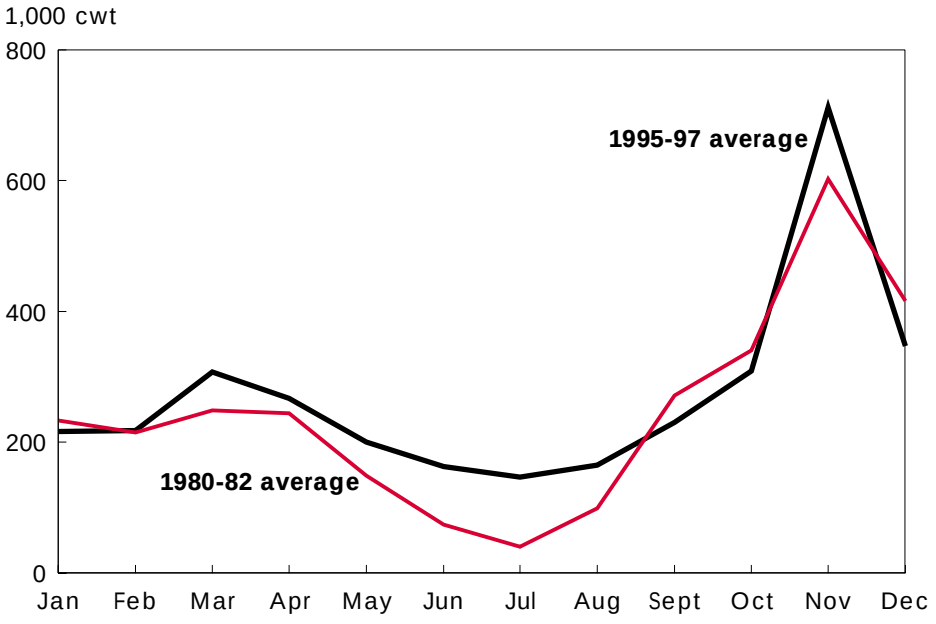
The recent turnaround in consumption may be attributed to several factors, including improved storage facilities, introduction of new sweet potato products, and increased use of sweet potatoes in the food-service industry. Over the past 20 years, many growers have invested in improved storage facilities so they can offer quality sweet potatoes year-round. After a curing process (in which the sweet potatoes are placed in a heated, humid environment for several days and then cooled), sweet potatoes can be stored for up to a year in controlled-atmosphere sheds, depending on product condition.

Besides increasing the storability of sweet potatoes, the curing process helps smooth exterior imperfections and converts natural starches in the sweet potatoes to sugar—an improvement in taste for many consumers. Green (uncured) product is typically shipped toward the end of the summer into the early fall, as cured product from the previous crop begins to dwindle and fresh product from the new crop is being harvested. Harvest varies by production area but generally begins with small quantities in mid to late June and runs into November. Cured sweet potatoes are typically shipped beginning in late October or early November, and can last into August or September.

Year-round availability and improved product quality has led to inroads in the food-service industries. Many restaurants, particularly several national steakhouse chains, have added sweet potatoes to their menus as a complement or alternative to white potatoes. Sweet potatoes can be served boiled, baked, and mashed, or used in casseroles, breads, and pies. Sweet potatoes can even be french fried and chipped like white potatoes. And unlike white potatoes, cured sweet potatoes can even be served raw like carrots (as sticks, shavings, etc).

Sweet potatoes are produced in 25-30 states. However, commercial production is concentrated in 11 states, mostly in the South. The leading producers are North Carolina (36 percent of U.S. production in 1997), Louisiana (25 percent), California (15 percent), and Mississippi (8 percent). On average, about 87 percent of the U.S.

Summer Demand for U.S. Sweet Potatoes Is Up from the Early 1980's



Economic Research Service, USDA

sweet potato crop is sold for food uses. Nonfood uses include 8 percent seed and 5 percent animal feed, shrinkage, and losses.

Most of the U.S. supply of sweet potatoes is domestically produced, but imports (including yams, a botanical cousin) have increased over the last 20 years. Imports currently account for about 5 percent of supply (up from 1 percent in 1978). However, much of this volume goes directly to Puerto Rico from Costa Rica, the Dominican Republic, and Jamaica and does not reach the continental U.S. U.S. exports of sweet potatoes are also fairly small—only about 2 percent of annual production.

In 1997, the U.S. exported 30 million pounds of sweet potatoes, at a value of $8.9 million. The vast majority of these exports (97 percent) went to Canada, with over 5 million pounds of product shipped in October when Canadians celebrate Thanksgiving. The second-largest export market is the United Kingdom (0.5 million pounds in 1997).

With a seemingly renewed consumer interest in sweet potatoes, grower cash receipts for sweet potatoes increased 34 percent between 1990-93 and 1994-97, totaling $208 million in 1997. Consistent yields and relatively stable prices in the past several years have kept plantings relatively stable. For 1998, harvested area was likely down less than 1 percent from a year ago (planted area was down 1 percent this spring). North Carolina reported a slight increase in harvested area (up 3 percent), while Louisiana and Mississippi remained unchanged. California harvested acreage was down 6 percent due to excessive rain during planting.

Despite little change in overall harvested acreage, production is likely to be down in 1998 from a year ago due to a lower national average yield. Weather conditions for much of the 1998 growing season were less than ideal in many sweet potato growing areas. From 1994 to 1997, yields were well above the long-term trend, due partially to adoption of improved varieties that are specific to soil type and climate.

Until late August, much of North Carolina's crop suffered from hot, dry conditions. However, late August and early September hurricanes (Bonnie and Earl) brought much-needed rain without damaging winds—allowing the crop to size nicely. Overall, crop quality is good.

Circumstances are similar in Louisiana, but the outcome may be mixed. Southern Louisiana suffered from summer drought, then was hit by heavy rains in September. The rain encouraged sweet potato sizing, but excessive moisture in some fields contributed to crop deterioration, including formation of soft spots. In northern Louisiana, some farmers irrigated, and some areas received timely rain at the end of the growing season. For the State, harvest ran behind schedule throughout the season, and output is likely to be down from last year. Quality is expected to be generally good.

USDA's National Agricultural Statistics Service will release the first forecast of sweet potato yield and production in January 1999. With a yield decline of 10 percent (to 146 cwt per acre), production would be approximately 12.1 million cwt. At that level, grower prices could rise from last year's season average of $15.80 per cwt to as high as $16-$17. A more moderate 2-5 percent decline in yields (12.8-13.2 million cwt in production) would likely peg season-average price at $15.50-$16.50. Shipping-point prices are virtually unchanged this fall from a year ago in North Carolina and Louisiana. Markets show steady demand, with volume about 10 percent lower in Louisiana and 15 percent higher in North Carolina compared with a year earlier.

Charles S. Plummer (202) 694-5256
cplummer@econ.ag.gov AO

Specialty Crops

Higher Tree Nut Prices for the Holidays

Smaller production of U.S. tree nuts, except pistachios, will result in generally higher prices this holiday season and into 1999. However, larger carryover from last year's record crops will augment supplies and moderate price increases. With the largest beginning stocks in 3 years, supply is off only 9 percent, despite a drop of 27 percent in total output.

U.S. production of the six major tree nuts (almonds, walnuts, pecans, pistachios, macadamias, and hazelnuts) is expected to total nearly 900 million pounds (shelled basis) in 1998, the third-highest during the last 5 years. Cool, wet spring weather hampered tree nut crop development for California almonds and walnuts and for Oregon hazelnuts. The inclement weather also delayed nut maturity and harvest by as much as 2 weeks in some areas. Growers and handlers (firms that process and market nuts) prefer an early harvest because it allows them to sell their product into markets in advance of foreign competition and establish a "seller's position."

Hot, dry conditions in many areas of the Pecan Belt (southern tier of states) from spring to mid-summer caused pecan yields to fall substantially. Abundant rains came later in the season, but were generally not beneficial to this year's production.

Smaller supplies and higher prices will cut total domestic tree nut consumption to 580 million pounds (2.1 pounds per capita) in 1998/99, down 2 percent from a year earlier. This figure includes tree nut imports—mostly cashews, Brazil nuts, pecans, chestnuts, pine nuts, and some others—which are expected to remain steady this season at about 240 million pounds. Exports are projected at 630 million pounds, slightly lower than last season but the second-highest on record.

Almond prices will rebound as supply shrinks. Almond production in California is forecast at 540 million pounds (shelled), down 29 percent from last year's record. But coupled with large carryover stocks, total marketable supply (excluding culls and inedibles) should be the third highest on record at 690 million pounds. Grower prices this season are expected to be near $2 per pound, up from an average of $1.55 in 1997/98 but below 1996/97 ($2.08) and 1995/96 ($2.48).

Briefs

Large Beginning Stocks Help Offset Lower U.S. Tree Nut Output in 1998/99

Commodity/ season	Beginning stocks	Marketable production[1]	Imports	Total supply	Domestic consumption	Exports	Ending stocks	Grower price
				Million lbs.				*$/lb.*
Almonds:								
1996/97	92.8	489.3	1.2	583.3	130.7	401.4	48.3	2.08
1997/98	48.3	722.5	0.1	770.9	136.2	462.8	171.9	1.55
1998/99	171.9	515.0	0.1	687.0	147.0	410.0	130.0	N.A.
Hazelnuts:								
1996/97	4.1	13.6	3.2	20.9	6.5	14.0	0.4	1.07
1997/98	0.4	30.8	10.4	41.6	19.9	20.3	1.4	1.24
1998/99	1.4	12.1	3.1	16.6	3.4	12.8	0.4	N.A.
Pecans:								
1996/97	85.9	99.0	28.1	213.0	133.7	19.6	59.7	1.43
1997/98	59.7	149.1	32.9	241.7	122.4	20.8	98.5	1.75
1998/99	98.5	80.6	38.0	217.1	125.4	13.5	78.2	N.A.
Walnuts:								
1996/97	55.3	169.6	0.3	225.2	82.2	102.7	40.3	1.84
1997/98	40.3	220.5	2.3	263.1	120.1	94.1	48.9	1.59
1998/99	48.9	188.1	2.9	239.9	110.0	98.4	31.5	N.A.
Pistachios:								
1996/97	13.8	40.4	0.9	55.1	15.2	32.2	7.7	3.01
1997/98	7.7	74.9	1.0	83.6	35.9	41.6	6.1	2.72
1998/99	6.1	81.2	0.9	88.2	35.8	45.4	7.0	N.A.
All tree nuts[2]:								
1996/97	251.9	824.8	212.7	1,289.4	524.3	605.9	156.4	N.A.
1997/98	156.4	1,211.0	242.3	1,609.7	590.0	692.9	326.8	N.A.
1998/99	326.8	890.2	242.0	1,459.0	577.8	634.1	247.1	N.A.

N.A.=Not available.
Shelled basis. 1997/98 preliminary. 1998/99 forecast. Season beginning July 1 for almonds, hazelnuts, and pecans; August 1 for walnuts; September 1 for pistachios.
1. Total production less inedibles and noncommercial use. 2. Includes macadamias as well as tree nuts not produced in the U.S.

Economic Research Service, USDA

The 1997/98 season marked the second consecutive year when almond value exceeded $1 billion. Almond exports reached a record 463 million pounds, while domestic consumption increased slightly to 136 million pounds (0.51 pounds per person). With a large share of the crop exported, almonds account for only about 25 percent of total domestic consumption of tree nuts compared with 60 percent of total tree nut production. U.S. export volume and domestic prices in 1998/99 will depend on competing tree nut supplies, particularly Spanish almonds (down sharply) and Turkish hazelnuts (up sharply). World almond production is estimated to be off 29 percent this season.

Walnut production drops as well. California production of English walnuts is forecast to decrease 28 percent to 220,000 tons (in-shell) in 1998, well below last year's record. Grower prices are expected to increase to near $1,400 per ton (in-shell) in 1998/99 as supplies contract 9 percent. Grower prices last season averaged $1,310 per ton (in-shell), near the mid-point of average prices received during the past 10 years ($1,000-$1,600). Some price breaks may occur this season, depending on global tree nut supplies and regional market demand. The California walnut industry, for example, is pushing demand by offering wholesale price discounts for early-season shelled walnuts. U.S. exports have trended up in recent years, but walnuts produced in France and China are expected to provide keen competition this year in European markets. World walnut production is estimated to be 5 percent lower this season.

Pecan crop is down sharply. Drought and hot weather conditions through much of the South and Southwest reduced the 1998 pecan crop to 183 million pounds (in-shell), sharply lower than last year's 338 million pounds. The smaller crop will be partially offset by higher beginning stocks and more imports expected from Mexico, so grower prices may rise only modestly this season. In addition, the final crop size last year was much larger than buyers and sellers assumed when they negotiated prices. Consequently, handlers have been working down "expensive" inventory and will be reluctant to bid prices up sharply.

Record pistachio production surprises industry. The 1998 California pistachio crop is forecast at a record 195 million pounds (in-shell), following last year's record 180 million pounds. A much smaller crop was expected because pistachio trees are typically "alternate bearing." This year's yield is expected to be a record 2,960 pounds per acre, and area is record high at 65,900 bearing acres.

Last year's crop depressed grower prices only slightly, and the value climbed to a record $203 million. A much smaller crop in Iran, the world's largest producer and exporter, created substantial foreign market opportunities for U.S. exports. This season, Iranian production will likely be up, which will increase competition for California

pistachios. About 50 percent of the U.S. crop is typically exported. Carryover stocks of pistachios are relatively small, so handlers must rely on current crop supplies to meet domestic and export demand.

Hazelnut production falls sharply. Hazelnut production in Oregon and Washington is forecast at 16,500 tons (in-shell). This compares with the record 47,000 tons in 1997 and 18,500 tons in 1996 and continues an alternate-bearing pattern of the last several years. Poor weather affected bloom and crop development, and the trees are recovering from record-high yields last year. While the U.S. crop is much smaller than production in Turkey, the world's largest hazelnut producer, U.S. hazelnuts are recognized in the world market for their size and quality. In 1998/99, U.S. hazelnut prices may decline despite the small crop because Turkey's production is up sharply. According to industry estimates, the Turkish hazelnut crop is 650,000 metric tons (in-shell), up 35 percent from 1997.

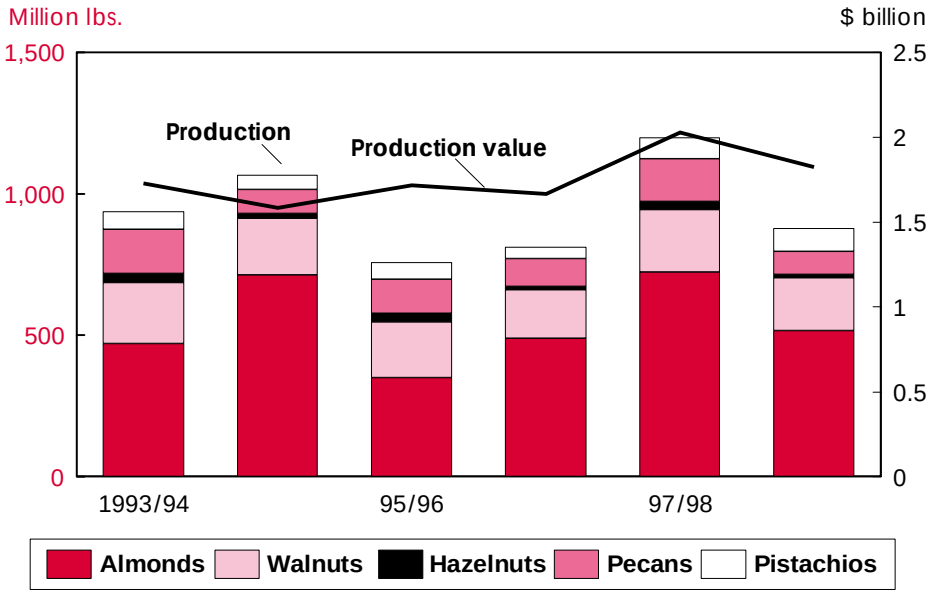
Total value of U.S. tree nut production is a record. Value exceeded $2 billion for the first time in 1997/98. Gross return per acre, excluding pecans, averaged $2,524 per acre, the highest on record and $320 above the previous marketing season. Strong export demand is a major factor behind these favorable financial returns. During the 1994/95 marketing season, total export quantity exceeded domestic use for the first time and has been above it ever since. In 1998/99, about two-thirds of the crop is projected to be exported, compared with just under half in 1988/89.

Higher returns in recent years have affected plantings. U.S. bearing acreage of tree nuts reached a record of over 700,000 acres in 1997/98 and is expected to increase another 1 percent this season. (Pecan acreage is excluded from the total and not estimated, because a significant part of production comes from native and seedling plants which grow wild or in small and widely scattered plantings.)

Despite this year's downturn, tree nut production is expected to continue trending upward, as new acreage more than offsets acreage losses. Typically, growers remove some trees 8-12 years after planting as orchards become crowded. But instead of removing and discarding trees, some growers, particularly pecan producers, are beginning to transplant them to another location to start a new orchard. This reduces the "startup" time to reach full bearing yields from 7-8 years to about 2-3 years. New orchards are also being planted with more trees per acre. In addition, new varieties produce at an earlier age, are more prolific at maturity, and are more resistant to disease and insects.

Doyle Johnson (202) 694-5248
djohnson@econ.ag.gov **AO**

U.S. Tree Nut Output Down Sharply in 1998



Shelled basis. 1998/99 forecast. Production excludes macadamia nuts as well as inedibles and noncommercial use.

Economic Research Service, USDA

Upcoming Reports—USDA's Economic Research Service

The following reports will be issued electronically on dates and at times (ET) indicated.

December

1 Food Security Assessment (3 p.m.)
*2 Sugar and Sweeteners**
*17 Agricultural Income and Finance**
*21 Agricultural Outlook**
22 U.S. Agricultural Trade Update (3 p.m.)

*Release of summary, 3 p.m.

Commodity Spotlight

National Corn Growers Association

Large U.S. Corn Supply, Sluggish Export Prospects Pressure Prices

U.S. corn farmers, now wrapping up the second-largest harvest in history, face weak prices in 1998/99, a situation reflected in most other commodity markets. A large increase in the supply of corn is expected to outstrip the rise in demand, pushing carryout stocks to the highest since 1992/93 and keeping downward pressure on prices.

Although domestic use of corn will rise to a new record, only a small recovery in U.S. exports is likely. Global import demand is weak, despite low prices, because of economic and financial problems in several regions of the world. U.S. corn exports, while forecast to increase from the depressed performance of 1997/98 because of declining competitor shipments, will remain comparatively low. U.S. market share of world exports is projected at 68 percent, up from 60 percent in 1997/98 but below the 74-percent average of the previous 10 years.

Low prices and the abundant supply of corn will fuel continued gains in domestic disappearance in 1998/99. Total U.S. use is forecast at 7.7 billion bushels, up 3 percent from the 1997/98 record, as both feed and residual use and food, seed, and industrial use expand. While low corn prices will benefit all end-users, the demand response to low corn prices will be tempered in some cases by low prices for users' products such as meat.

Production & Yield in 1998 Is Second Highest

Corn production is forecast at 9,836 million bushels, up 5 percent from 1997 and second only to the 10.1-billion-bushel crop of 1994. Because of higher carryin stocks, corn supply for the 1998/99 marketing year will be slightly larger than in 1994/95 and the largest in 11 years.

Planted area rose about 1 percent to 80.8 million acres, the highest since 1985, despite strong competition from soybean plantings, which reached a record high. Despite concerns at planting time about potentially weaker markets, uncertainty about weather ran higher than usual. Questions about whether the El Niño weather pattern might result in severe heat and drought stress similar to what hit the Midwest in 1983 and in some other El Niño years caused some growers to see at least an outside chance for a sharp spike in prices.

Average yield of corn in 1998 is forecast at 133.3 bushels per acre, slightly above the long-term trend. This would be the second-highest yield behind 1994, when yields reached 138.6 bushels. The growing season turned out reasonably well for most of the Corn Belt, although there was considerable variability—as in most years—with numerous reports of localized problems, stemming largely from excessive moisture. Impressive yield gains occurred in much of the northern and western tier of the Corn Belt, and record crops are forecast for Kansas, Nebraska, Minnesota, South Dakota, and North Dakota.

Corn crops in Texas and several smaller corn-producing States across much of the South, however, were decimated by heat and drought. Some of the corn also was contaminated by aflatoxin, preventing or severely limiting the corn's use for processing or animal feeding. Forecast output in Texas is down about 30 percent from last year and will be the smallest crop since 1991. The national impact is limited because the region produces a relatively small share of the total crop.

This year has been another demonstration of the corn sector's strong productivity growth, even when conditions are imperfect. Although the path has been erratic due to droughts and other weather disruptions in some years, corn yields have advanced impressively over the last few decades. Since the early 1960's, average U.S. yield has doubled, with underlying trend growth of about 1.7 to 1.8 bushels per year. Improved genetics account for about 60 percent of the gains, according to industry sources. Seed companies are continually upgrading and replacing hybrids. The recent introduction of Bt corn has reinforced yield gains by reducing losses caused by the European corn borer (*AO* August 1998).

Food, Seed, & Industrial Use To Continue Strong

The generally favorable outlook for economic growth in the U.S. is expected to support gains in most industrial uses of corn, such as starch used in building

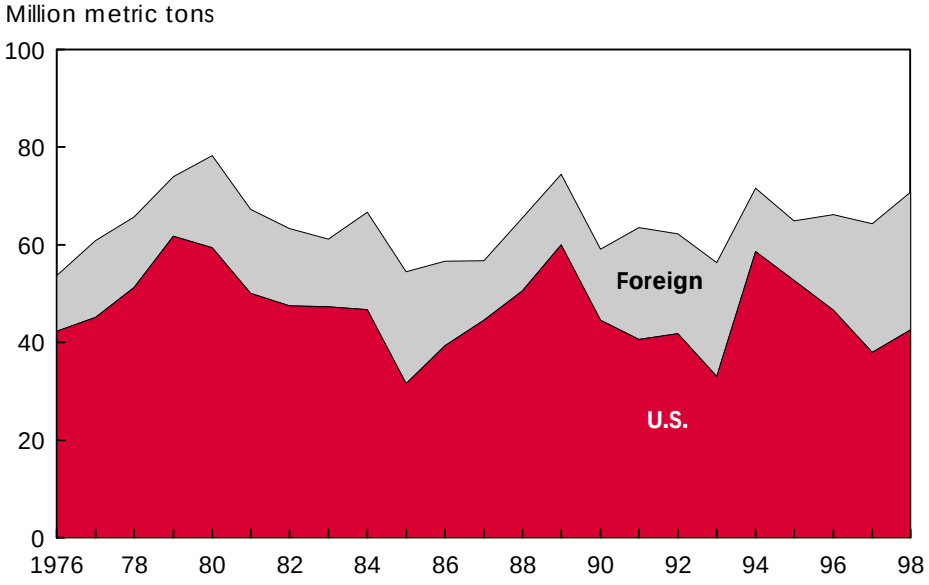
materials and in production of paper. Population growth and taste preferences are driving much of the growth in food use of corn, including the upward trend in corn used for snack foods. Food, seed, and industrial use of corn (FSI) is forecast to increase 4 percent from the 1997/98 record to 1,850 million bushels, reflecting fairly steady growth in most categories.

Gains in some categories of use often reflect substitution for other ingredients. For example, increased use of corn sweeteners in recent years has been the result of the popularity of fat-free foods, in which corn sweeteners help to provide taste to compensate for loss of the fat. This particular use seems to be flattening and may contract slightly as some fat-free formulas are discontinued. High-fructose corn syrup (HFCS) use expanded dramatically in the 1980's as it replaced sugar in many soft drinks, and growth has remained strong in the 1990's as consumption of soft drinks and other beverages continues to increase. Corn used to make beverage and manufacturing alcohol is expected to show a small decline in 1998/99, reflecting a downturn in the export market. This stems mainly from economic problems in Russia.

The use of corn for fuel alcohol (ethanol) is forecast to grow 8 percent in 1998/99, a slower rate of gain than the 12 percent in 1997/98. Since the sharp decline in 1995/96, when corn shortages and record-high prices curtailed ethanol production and led to some plant shutdowns, use has been rebounding. A number of smaller plants have opened recently, and output in 1998/99 is expected nearly to equal the peak year of 1994/95.

For some ethanol producers, current low corn prices are resulting in very favorable margins, especially where production is contracted for oxygenate use. However, ethanol prices in spot markets are low because of the influence of cheap gasoline and petroleum products. This could limit ethanol's use as an octane booster, as well as provide competition in some oxygenate markets. In addition, prices of the main ethanol co-products are weak. These include corn gluten feed and meal and distiller-dried grains, whose prices have been pulled down by large competing supplies of soybean meal and other protein sources used in animal feed.

U.S. Corn Exports Dominate World Trade



Marketing year beginning October. 1998 forecasts.
Economic Research Service, USDA

Large Livestock Production To Sustain High Feed Demand

With declining prices for corn and other grains, along with a dramatic fall in the price of protein meal, feed costs are down sharply. Large production of livestock, particularly hogs and broilers, combined with low feed prices, will keep feed demand high. However, record meat supplies and some clouds on the export horizon have resulted in low prices for red meats, which could temper the benefits of low feed prices and eventually limit expansion by some livestock operations.

Corn feed and residual use is forecast at 5,850 million bushels, up 3 percent from the previous year's record high. Supporting the increase are a sharp decline in availability of grain sorghum for feed, along with an expected decline in the feeding of wheat, which was up in the summer months of 1998.

The cattle sector is in a liquidation phase, and the total number of cattle, as well as cattle on feed, will decline in the year ahead. In the near term, however, delayed marketings (as producers await higher prices) and cheap feed have resulted in feeding cattle to heavy weights, supporting high corn use.

Expansion in the poultry sector will also contribute to growth in feed use. Egg production is expected to increase 2 percent in 1999, and turkey output should remain about unchanged after declining more than 4 percent in 1998. Broiler production is forecast to increase 5 percent in 1999, following lackluster growth of less than 2 percent in 1998. Broiler prices have been very strong throughout the summer and fall, supported by the fast-food industry's robust demand for breast meat, and low feed prices have meant excellent margins on broilers.

The export outlook is a concern, however, and broiler prices are expected to soften as the pace of exports slows. U.S. poultry exports are expected to decline in 1999, the first drop since 1984.

In September 1998, hog producers planned further expansion in the months ahead, despite low prices. Pork production in 1999 is expected to be up 3 percent from 1998 and up nearly 13 from 1997. Very large inventories will contribute to high feed needs. Export growth has continued strong in 1998, boosted by

Commodity Spotlight

China: Uncertain Player in the World Corn Market

In 1994/95, U.S. corn exports got a strong boost when China switched in a matter of months from being a large exporter to a large importer of corn. Many analysts saw this as marking a long-term turnaround in China's trade status. Although China is the world's second-largest producer of corn, its vast population, limited agricultural land, and a sharp rise in livestock and poultry production and consumption were expected to keep China dependent on imports to meet growing demand for feed grains. This may still be an accurate appraisal for the long run, but in the short run a different scenario has developed. China resumed significant exports of corn in 1996/97, and its imports have since shrunk to very small levels.

In the early 1990's, strong income growth and improving diets led to rapid growth in feed use. Not only did consumption growth outstrip production, but distribution within China also presented problems. The bulk of the population and of meat production are in southern China, while most surplus corn is produced in the northeast. An overburdened transportation network could not always keep up with demand for transferring northeastern corn to southern livestock producers.

By 1994/95, at a time of high inflation and rising grain prices, the government of China decided to allow corn imports and halt exports. Corn imports soared to 4.3 million tons from zero the previous year. Much of the corn was destined for joint-venture feed operations established through foreign investment.

In the same year, China's corn exports declined to 1.4 million tons from 11.8 million the previous year. On a year-to-year basis, the increase in imports and drop in exports meant a net trade shift of 14.7 million tons (579 million bushels). Most of this change benefited the U.S. The spurt in U.S. exports that year and expectations that China would remain an importer helped to drive up U.S. and world corn prices.

China's large imports ended by the latter half of 1995/96. By that time, U.S. and international corn prices had risen to record highs, making imports less attractive. Perhaps more importantly, China's government made a concerted effort to raise domestic corn production by implementing a new program, the governors' grain responsibility system, which aimed at attaining self-sufficiency in grain.

Although China's corn output had been trending upward for many years, the growth rate accelerated in 1995/96. Acreage increased as free-market prices rose and the government raised protection and fixed-quota prices. With favorable weather, yields increased and production reached a record. Acreage and yields rose again in 1996/97, leading to a further 14-percent gain and a record 127-million-ton crop.

While the grain sector had been liberalized to a considerable extent over the previous years, there were still strong administrative measures taken to encourage corn output, apparently using the network of local government officials and cadres. These efforts contributed to larger plantings, greater use of improved seed, and improved cultivation practices as more "scientific methods" were adopted.

With record harvest and large supplies, market prices for corn began to fall. In 1997/98, corn plantings dropped, and combined with a serious drought resulted in a large decline in production. Nevertheless, the huge accumulated stocks permitted another increase in exports.

During the 1997/98 marketing year, USDA's forecasts for China's corn were unusual in that production was reduced in response to the drought while export forecasts were raised in response to sales and shipment data. The critical unknown was the size of China's corn stocks, since information on China's grain stocks is considered a state secret.

low prices and by sales of lower value cuts. Since the September survey of farrowing intentions, hog prices have continued to decline to the lowest level since the early 1970's. However, sow slaughter rates have not increased substantially.

In contrast to most meat prices, milk prices have been very strong in recent months, and these price signals are expected to lead to an increase in milk production in 1998/99. Although no increase in milk cow numbers is anticipated, milk per cow should be up, strengthening feed use.

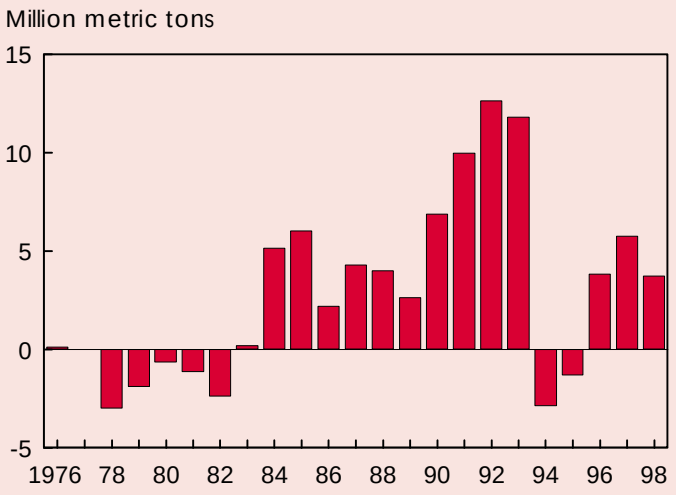
Corn Prices To Be Lowest Since 1987/88

Corn prices began a steep descent during the latter half of the summer and are likely to remain weak in the months ahead, reflecting supply and demand developments in the corn market and the generally weak price outlook for most other crops. Carryin stocks of corn for 1998/99 are up 48 percent from a year earlier to 1,308 million bushels, and stocks are projected to increase for the third consecutive year. The projected carryout of 1,779 million bushels will be the highest since the 2,113 million in 1992/93.

The season-average farm price of corn in 1998/99 is forecast at $1.80-$2.20 per bushel. The midpoint of this range would be the lowest since $1.94 recorded in 1987/88. The lowest corn price so far in the 1990's is $2.07 in 1992/93, a year that saw a record crop, record domestic use, sluggish exports, and very large stocks—somewhat similar to the 1998/99 outlook.

However, under provisions of the 1996 Farm Act, the production flexibility contract (PFC) payments most farmers will receive from the government this season will average 37 cents per payment bushel. In addition, farmers will receive 50 percent of their 1997/98 PFC payment under

China's Net Corn Exports Rebound



Marketing year beginning October. 1998 forecast.
Economic Research Service, USDA

Livestock production in China has also apparently been overestimated, reflecting some analytical issues associated with estimates for a large sector that includes substantial backyard production, as well as anomalies such as double counting of animal slaughter and inflated output statistics reported by local officials (*AO* November 1998). Recognition of this overestimation, coupled with a recent slowing in meat consumption growth, is consistent with other indications that feed grain supplies are large.

An underlying issue hampering outside analysts' understanding of the feed grain situation in China is the dominant role of the central government in the grain sector. The government makes all decisions on corn and other grain exports, which are implemented by COFCO, a state firm that acts as an agent. The criteria that guide export decisions are not always clear.

Corn imports are also controlled, allowing for the current situation in which international prices for corn are currently below local prices in much of China, but imports remain very small. Imports are allowed only under quotas assigned by the government and are permitted only if the purchasing enterprise or firm in China re-exports a finished product. Such finished products include starch and other processed corn products, but not meat from livestock fed on imported corn.

Last spring, the government of China announced a number of reforms aimed at eliminating costly subsidies and reducing the heavy financial losses the central government has incurred in managing the purchase, storage, and transportation of grains. The new policy includes a prohibition on sales of grain by state grain enterprises below cost. Also, the government wants farmers with fixed quota prices to sell all of their marketable grain to state-owned Grain Bureaus, effectively creating a monopsony buying situation. These reforms seem likely to obscure the role of price signals local markets have provided, and they could reverse the recent movement toward greater market orientation.

For more information on China's grain policies, see "China's Grain Reforms of 1998" in the November 1998 Grain: World Markets and Trade *(Foreign Agricultural Service, USDA) at http://www.fas.usda.gov/grain/circular/1998/98-11/dtricks.htm*

loss assistance announced by USDA in late October. For corn, PFC payments averaged 49 cents per bushel in 1997/98. Many producers may also receive payments under disaster assistance programs.

Another program available to farmers in the corn market this year is loan deficiency payments (LDP's). Farmers can receive an LDP when the posted county price for corn (which is usually in line with the local cash price) falls below the county loan rate (*AO* October 1998). Many farmers have taken the LDP this fall and then apparently put corn into storage because prices have been low. But storage space is limited in many areas because of large supplies, and if an LDP is taken, the corn is not eligible for the government loan program.

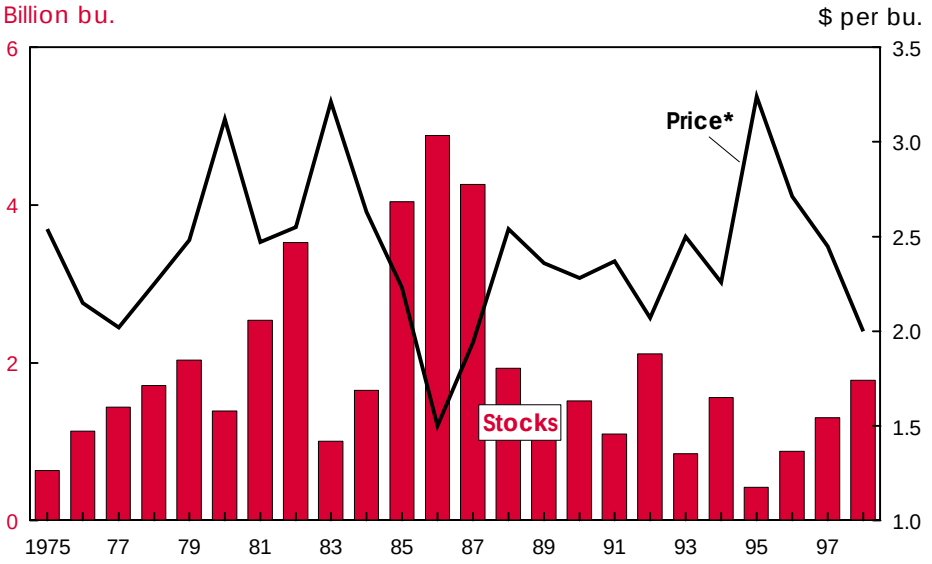
Another uncertainty is the seasonal price pattern. Corn prices typically bottom out around the harvest months of October and November and then climb slowly until mid-summer. Prices in 1997/98, however, deviated from the normal seasonal pattern. Prices were highest over the first half of the marketing year and then declined as demand weakened and new-crop prospects improved. This year, the futures market would indicate high enough contract prices in the months ahead to cover storage costs for many producers. But if too many farmers hold corn early in the year, providing some support to prices by keeping cash markets relatively tight, there is risk that heavier sales later in the year could depress prices unless demand is very strong.

Moderate Rise Projected For U.S. Exports

Although global corn trade is expected to decline for the second year in a row, U.S. exports will rise as other exporters reduce shipments. Following a steep decline over the previous 2 years, U.S. exports in 1998/99 are forecast at 1,675 million bushels, 11 percent over the previous year.

Commodity Spotlight

U.S. Corn Prices Drop As Stocks Build



Market year beginning September. 1998 forecasts; price is midpoint of forecast range.
*U.S. season-average farm price.

Economic Research Service, USDA

World trade is forecast to drop 2.5 percent in 1998/99 to 62 million tons, the lowest since 1993/94, because of sluggish demand in several key importing countries, increased domestic production in others, and competition from feed wheat, rye, and barley in some markets. In many cases, reduced incomes are limiting importers' response to low feed grain prices, and low meat prices in several meat exporting countries are also making meat imports an attractive option. In countries where financial problems are severe, consumers are cutting back on meat purchases.

Japan's corn imports are forecast to slip to the lowest since the mid-1980's. Japan is the largest importer and by far the largest U.S. market. While industrial use of corn is steady, the major use is for feeding, which has been inching down for several years as Japan's meat imports have risen.

South Korea, the world's second-largest importer, is forecast to reduce its corn imports again, down 13 percent to 6.5 million tons because of the financial crisis and large imports of feed wheat. In addition, imports by Taiwan, the third-largest importer, are forecast to be flat at 4.5 million tons due to an outbreak of hoof-and-mouth disease in 1997 that reduced hog inventories. Imports were around 6 million tons before the outbreak.

Corn imports by Southeast Asian nations in aggregate are not expected to show much change. The major corn buyer in the region, Malaysia, which has essentially maintained its poultry sector, is forecast to increase imports slightly to 2.3 million tons. Indonesia will not import at all, after purchasing 600,000 tons of corn in early 1997/98 before the worst of the financial crisis hit. Because of a sharp drop in feed use, Indonesia actually exported 500,000 tons in 1997/98 and is expected to export again in 1998/99. Imports by the Philippines and Thailand, which are on a much smaller level, are forecast to decline slightly. Both countries are expecting substantially larger crops in 1998/99.

Corn use and import demand will continue very low in the Baltics and New Independent States of the former Soviet Union for the foreseeable future, although the U.S. announced in early November that it will provide Russia 500,000 tons of corn under concessional terms. As recently as 1991/92, annual imports were 10 million tons, but have fallen to around 500,000 tons in the last several years. The decline of the Soviet market was largely offset by growth in Asia and other developing regions.

Currently, the outlook for import demand remains reasonably strong in some other regions. Only a small decline is forecast for Mexico's corn imports, down 250,000 tons from the 4.5 million of 1997/98, remaining well above the minimum NAFTA import requirement of just under 3 million tons. Elsewhere in Latin America, corn imports are expected to stay fairly strong. Imports by North Africa and the Middle East are forecast to increase modestly, after dipping from the record 1996/97 high last year.

Export Competition To Slacken

Shipments by most foreign corn exporters are forecast to decline in 1998/99, bolstering U.S. export prospects. The sharp declines in U.S. exports in the last 2 years had resulted largely from rising competition. Foreign exports increased by 7 million tons (60 percent) in 1996/97 and by another 6 million (30 percent) in 1997/98 to a record 26 million tons. The increases reflected strong grower response to high prices, as well as favorable weather and changing policies in some countries.

Corn exports by Eastern Europe will decline about 30 percent in 1998/99 after a sizable drop in production. The region's exceptionally large crops in 1997/98 propelled exports to the highest level since the early 1990's. With domestic consumption still relatively low because of low livestock inventories, much of the production gain was exported to markets in the Middle East, North Africa, and even Asia.

The greatest decline in 1998/99 is projected for Argentina, where production and exports have soared in the last few years. A more stable economic environment has promoted investment in agriculture and improvements in infrastructure, leading to more use of modern inputs, particularly improved corn seed and increased application of fertilizer, pushing yields higher. Corn acreage increased modestly in the first half of the 1990's and then jumped nearly 30 percent in 1996/97, pushing production to a record

15.5 million tons as producers reacted to high corn prices.

Argentina's production climbed another 25 percent in 1997/98 to 19.3 million tons. Excellent weather—plentiful rains associated with the El Niño weather pattern—and continued gains in technology propelled yields well above the long-term trend. Despite recent growth, Argentina's domestic corn market is small, and most production gains move into export channels. Exports reached an estimated record 13 million tons in 1997/98.

In 1998/99, Argentine growers are expected to cut back corn acreage slightly, with prices for soybeans relatively more favorable. Corn production is forecast to decline about 20 percent in 1998/99. Average yield is expected to drop from the exceptionally high 1997/98 level, but is forecast the second highest on record due to continued growth in input use. Exports of corn will also fall, projected down 19 percent.

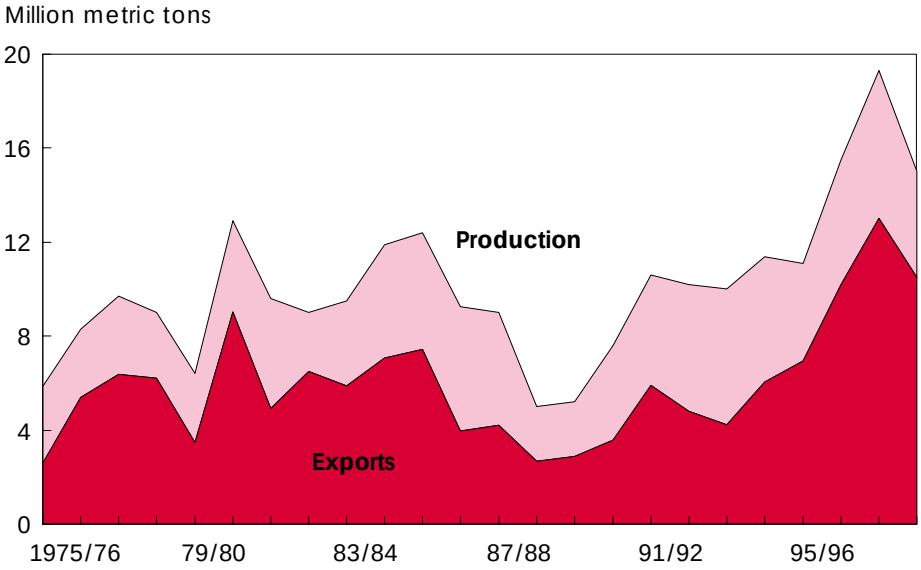
China's corn production in 1998 is forecast at 124 million tons, up 19 percent from last year's drought-reduced crop and the second highest ever. Corn acreage increased nearly 500,000 hectares, and yields are expected to be up sharply. Heavy summer flooding did not affect important corn growing areas, and the abundant moisture was beneficial for corn.

Growth in China's feed demand, having weakened in recent months, is not likely to recover to the torrid expansion of earlier years. Weaker pork and poultry exports and continued large imports of chicken parts into China are slowing feed demand, as is the slower growth in the economy and real per capita income. The price of pork, the main meat consumed in China, has declined sharply as consumers purchase less meat.

China's corn exports are forecast at 4 million tons, down from 6 million in 1997/98, but as always, there is a great deal of uncertainty in China's trade outlook. A large domestic crop and some slowing in domestic demand imply large exportable supplies. The need to make space for incoming crops has sometimes been cited as a reason for exports in recent years. It is conceivable that some old crop from 2 or 3 years ago, procured at much lower prices, could be exported if still in stocks and if storage costs were covered. However, low prices in export markets could hold back China's sales since new policies are supposed to prevent selling at prices under costs.

Pete Riley (202) 694-5308
pariley@econ.ag.gov **AO**

Argentina's Corn Production and Exports To Drop in 1998 After Recent Runup



1998/99 forecast. October-September for exports.
Economic Research Service, USDA

Commodity Spotlight

Georgia Peanut Producers Association

U.S. Peanut Consumption Rebounds

The humble peanut may lack the glamorous image of some of its competitors such as cashew nuts, almonds, pistachios, and pecans. And with a farm-gate value of less than $1 billion for the 1997 crop, peanuts barely manage to squeeze in among the nation's top ten field crops, falling far below the $24-billion corn crop.

But the familiar peanut butter sandwiches in the worker's lunch box and on the school lunch menu confirm a widespread perception of the peanut (AKA ground nut or goober) as a staple item in the American diet. And while not a key player on the national farm scene, the peanut is a long-established commodity in some regions of the U.S., helping to shape the culture and economy of those regions. Peanuts are particularly important to local economies in the coastal plains areas of southwest Georgia and southeast Alabama, the Tidewater area of Virginia, the coastal plains of North Carolina, and portions of central and far west Texas.

Peanuts also count on Capitol Hill. U.S. producers of peanuts for food use have long benefited from a government program that has provided price support at levels well above world market prices. During the 1980's and 1990's, when price support for other commodities was being reduced in amount and coverage, price supports rose for peanut producers based on increases in costs of production. Also encouraging production during 1986-95 were high levels of government purchases of peanut products for food assistance programs and a minimum national poundage quota. The peanut program that emerged from the 1985 and 1990 farm legislation (specifically for food use peanuts) was likely the envy of other commodity groups and was a testament to the power of supporters of the U.S. peanut program in Congress and elsewhere.

For most government program crops, the passage of new farm legislation in 1996 marked a dramatic move forward along a path to increased market orientation of farm policy. Under the 1996 Farm Act, program payments were no longer linked to planting decisions, nor to market prices. The emphasis turned to increasing producer reliance on market signals when deciding on resource allocation to maximize income.

But changes in the peanut program brought about by the 1996 farm legislation were relatively minor compared with changes for other affected crops. For food use peanuts, supply control in the form of production and import quotas remained in effect. And support prices, though reduced, were maintained well above prices that would likely prevail in the absence of the program. Peanut program advocates may have been relieved to survive the sweeping changes made in other program crops. But U.S. producers faced another problem: extremely bleak domestic demand for food peanuts since the early 1990's.

Once-Steady Demand for Food Peanuts Turns Weak

During the 1950's through the 1980's, annual U.S. food use of peanuts was on a strong run, setting records in 31 of the 40 years. Over this period, food use of peanuts exhibited a very stable growth rate, increasing at 2.1 percent per year. In the late 1980's, peanut food use vaulted higher as a result of increasing government purchases for domestic feeding programs (e.g., School Lunch Program and Temporary Emergency Food Assistance Program). Food use peaked in 1989 at 2.324 billion pounds (in-shell).

U.S. food use of peanuts is comprised of *shelled* and *in-shell*. Edible *shelled* use, by far the larger of the two, is reported according to four categories. Snack peanuts and peanut candy are two such categories, and together account for slightly less than half—about 45 percent—of total shelled peanut use. Peanut butter is by far the largest category, usually amounting to one-half of shelled use. "Other" edible uses account for a small amount of peanuts.

Bucking trends in use among other categories, *in-shell* consumption has set records in 3 of the past 4 years. While this category includes the traditional "ball park" peanuts, new products like flavored in-shell peanuts (e.g. jalapeno, spicy, cajun and salty) have likely helped boost consumption. In 1997/98, use of in-shell peanuts was a record 184 million pounds and represented nearly 9 percent of U.S. food use of peanuts.

A severe drought in the 1990/91 crop year (beginning in August) reduced supply and drove up prices for peanuts and peanut products. As a result, the average retail price of a pound of peanut butter reached a record $2.21 in April 1991, 19 percent over a year earlier. Consumption dropped sharply in 1990/91, but rebounded in 1991/92. Prior experience with short crops and high prices suggested that a complete recovery in consumption growth would likely materialize within a couple of seasons as supplies rebounded and prices moderated. Indeed, a year after April 1991, peanut butter prices had fallen to $1.96 and were down to their pre-drought levels ($1.86) by April 1993. However, the years following 1991's initial consumption rebound saw an unexpected weakening in demand for food peanuts.

When peanut consumption not only failed to rebound following a return to more normal prices, but also took a nosedive in the mid-1990's, analysts began to focus on other factors driving down use. In the early 1990's, stagnant commercial peanut use, rapidly falling government purchases, and rapidly rising volumes of imported peanuts and products combined to reduce demand for U.S.-grown food peanuts. The government curtailed purchases sharply in 1993 and subsequent years in response to reduced appropriations on food assistance programs and perhaps a reluctance by some meal planners to include peanuts and peanut products because of the fat content. Government purchases declined from a peak of 172 million pounds (in-shell equivalent) in 1992/93 to a low of 49 million in 1995/96. Meanwhile, non-government purchases of peanuts and products had stabilized at about 2.02 billion pounds beginning in 1992.

A phenomenon that profoundly affected the demand for U.S. peanuts for food use was a runup in imports of peanuts and products beginning in the late 1980's, initially in the form of peanut butter and later as peanuts, when trade agreements (i.e., the North American Free Trade Agreement and the GATT Uruguay Round Agreement) increased import quotas. Prior to these changes in trade patterns, imports were such an insignificant factor in the consumption of food peanuts (one-tenth of 1 percent) that the peanut quota (U.S. food-use peanuts) in a given year was virtually equivalent to projected peanut use. But for the first time, the concept of quota peanut use as only a subset of total edible peanut use had come into play.

Edible Use of Peanuts Ticks Up Since Mid-1990's While Imports Remain Strong

	Commercial sales[1]	Government purchases[2]	Total edible use[3]	Imports		Quota peanut use[4]
				Raw peanuts	Peanut butter	
			Million lbs.			
1982-85 average	1,851	60	1,910	2	0	1,908
1986	2,007	70	2,077	2	4	2,071
1987	2,001	73	2,074	2	3	2,069
1988	2,137	125	2,262	2	8	2,252
1989	2,160	164	2,324	4	12	2,308
1990	1,997	52	2,049	27	29	1,993
1991	2,117	129	2,246	5	39	2,202
1992	2,020	173	2,193	2	71	2,120
1993	2,028	139	2,167	2	79	2,086
1994	2,020	70	2,090	74	80	1,936
1995	2,019	49	2,068	153	75	1,840
1996	2,060	68	2,128	127	99	1,903
1997	2,094	75	2,169	141	70	1,958
1998	2,125	85	2,210	152	75	1,983

In-shell basis. Crop year beginning August 1. 1998 forecast.
1. Includes imports. 2. Peanut butter, roasted peanuts, and granules. 3. Commercial sales plus government purchases. 4. Total edible use less imports.
Economic Research Service, USDA

Compared with the pre-drought highs in 1989, total purchases fell by about 250 million pounds, or 11 percent, by the end of 1995/96. By 1995, food use of domestic-origin peanuts had fallen to 1.84 billion pounds (in-shell), a 468-million-pound drop from its 1989 peak. Total food use of peanuts fell by less—256 million pounds—as peanut and peanut butter imports increased 212 million pounds (in-shell).

U.S. Peanut Industry Struggles To Regain Footing

With trade agreements opening up the U.S. peanut market to an increase in raw peanut imports, total imports were much higher than in previous years (nearly 10 percent of total food use in 1997/98) and would grow at a modest rate in future years. (The Uruguay Round Agreement, however, also restrained peanut butter imports, which had been unregulated and rapidly growing.) It was clear that the U.S. market could absorb increases in imports and still expand domestic consumption of U.S. food peanuts only if the industry could grow the total domestic market for food-use peanuts. Such growth had not been seen in years, but the alternative was declining sales of high-value food peanuts and declining farm income.

Peanut industry leaders did not have to look far to find another agricultural commodity group that had undergone a similar upheaval. In the 1970's and early 1980's, the U.S. cotton industry had watched as polyester and rayon drew market share away from cotton. But the trend changed as cotton, a natural product, fit very well into a reversal in consumers' preferences away from manmade fibers. Aided by a coordinated industry promotion effort, cotton rode the wave of consumer sentiment to a position of dominance in textile mill use. By the end of the decade and into the 1990's, domestic mill use of cotton was increasing by an average of about a half million bales a year.

Peanut proponents, on the other hand, found themselves rowing upstream, as consumers focused on healthier eating habits, including reducing consumption of high-fat foods. Peanuts, while high in protein, are also high in fat. Additionally, press reports spotlighted incidences of allergic reactions to peanuts, prompting suggestions from some quarters to ensure that those with allergies did not inadvertently consume peanuts and products.

Commodity Spotlight

Basics of the U.S. Peanut Program

The U.S. peanut program is a two-tier price support program featuring a high support rate for peanuts for food use (quota peanuts) and a much lower rate for peanuts grown for export or crushing (additional peanuts). The price support is administered through nonrecourse marketing loans available to all peanut producers. In order for such a program to be effective, it is necessary to limit supply through domestic production control and quotas on imports. Any farmer may grow peanuts in any amount, but only those with peanut quota may market their output into food channels—and then in an amount not exceeding their individual quota.

Selected Program Provision	1990 Farm Act	1996 Farm Act
Quota peanut support rate	Tied to cost of production and could increase up to 5 percent per year, but could not decrease. Rose to $678.36 in 1995/96 season from $642.80 in 1991/92.	Eliminated cost-of-production escalator. Lowered and fixed the rate at $610 per short ton for 1996-2002 crops.
National quota poundage	USDA required to announce a national quota poundage equal to amount estimated to be needed for food, seed, and related uses.	Retained. Established a separate quota for seed available to all peanut producers (quota and additionals).
Minimum national quota poundage	USDA could not set the quota poundage below 1.35 million short tons.	Eliminated. USDA sets quota poundage equal to domestic food and related uses.
Loan operations	Could (and did) result in substantial costs to taxpayers when government was forced to sell quota peanuts below the loan rate.	Made peanut program "no net cost." Established plan to increase marketing assessment to cover any losses on loans.

By the mid-1990's, the image of peanuts as a food product was under frequent attack for a broad spectrum of reasons. In response, the peanut industry organized to promote their product by identifying the particular problem and by focusing on the findings of highly credible scientific research.

The Peanut Institute, formed in 1996 by members of the American Peanut Shellers Association, began to assess the results of a Gallup poll on consumers' attitudes about peanuts. The survey revealed that many consumers considered peanuts fattening. It also showed that the industry should improve consumers' knowledge—not only about food attributes of peanuts in general, but also about how peanuts fit into a balanced diet. For instance, some consumers thought that peanuts contain cholesterol, which is only found in animal products. Most fat in peanuts is monounsaturated and polyunsaturated (i.e., not saturated). Substituting unsaturated fat for saturated in the diet has been shown to lower blood cholesterol levels, which may reduce risk of coronary heart disease.

In addition, the Peanut Institute funded a study that highlighted the presence in peanuts of the antioxidant resveratrol, the same substance found in red wine to which doctors attributed reduced incidence of heart disease and cancer rates among some segments of the French population. Another study, done at Penn State University, showed that peanuts and peanut butter in a diet could lower total cholesterol and LDL cholesterol levels. With these findings in hand, the peanut industry set about extolling the positive attributes of their product and correcting misconceptions. Fortunately for the Peanut Institute, which operates on a small budget, the research findings were widely publicized by more than 400 newspapers and 60 television stations.

While it is difficult to measure the total effect of these findings on consumer attitudes and their marketplace decisions, U.S. edible peanut consumption is on the rebound. Total edible use rose to 2.13 billion pounds (in-shell) in 1996/97, up nearly 3 percent from 1995/96. In 1997/98, total edible use rose another 1.7 percent, to 2.17 billion pounds. Lower peanut prices may have been a factor in boosting consumption, while the introduction of new products (e.g., flavored spreads for dipping) gave consumers some choices previously not available. Modest increases in government purchases of peanuts and products have also aided consumption.

Calculating Food Use Is Critical

Trends in peanut consumption are closely monitored by USDA in order to implement the peanut program properly, specifically to help set the annual marketing quota. Under the Federal Agriculture Improvement Act of 1996, the Secretary of Agriculture must offer a peanut program if peanut farmers approve the use of poundage quotas. U.S. peanut producers approved poundage quotas for marketing years 1998-2002 in a mail referendum held December 1-4, 1997.

The national peanut poundage quota for the marketing of food-use peanuts is the quantity of peanuts projected for domestic

food use in the upcoming marketing year. (The quota includes shrinkage, crushing residual, and allowance for disaster transfers and underproduction.) An accurate forecast is critical because a short estimate could drive the cost above what may have prevailed for food peanuts to manufacturers, and ultimately to consumers. On the other hand, overestimation could result in peanut program outlays when excess peanuts are sold at market prices (less than the loan rate). These costs may ultimately have to be borne in large part by peanut producers according to a multistep procedure designed to ensure that there is no loss to the government (in principal or interest) when operating the peanut marketing loan program.

For the 1998 peanut crop, USDA announced a national peanut poundage quota of 2.334 billion pounds (in-shell), up 3 percent from 1997. The 1997 national peanut poundage quota was up 3 percent from the 1996 level. These quota increases reflect an apparent return to more normal rates of growth in annual U.S. peanut consumption.

But just as the peanut industry looks for a return to normalcy in its market, storm clouds could be forming again. Recently, allergic reactions to peanuts and peanut products have captured press attention again. In August, the U.S. Department of Transportation (DOT) issued a letter to the 10 largest U.S. airlines informing them that according to the Air Carrier Access Act, they must accommodate passengers with disabilities—including those with allergies to peanuts. The DOT ordered peanut-free buffer zones on aircrafts, including the row of seats with the allergic passenger(s) and the rows directly in front and behind.

The DOT decision prompted a sharp reaction by peanut proponents from Georgia to Capitol Hill. Peanut producers, while concerned about losing the airlines' business due to what producers perceive as an overreaction to the problem, fear that government purchases of peanuts and peanut products are at risk (including large purchases for the school lunch program). On Capitol Hill, congressional representatives of peanut-producing states were quick to call for a meeting with DOT officials. With the issue far from settled, some airlines have pointed out that the easiest long-term solution is to serve an alternative, such as pretzels.

In addition to the allergy issue, the U.S. peanut industry faced peanut butter/paste imports from Mexico for the first time in July. Imports from Mexico in August were nearly double the July level. In the late 1980's and early 1990's, it was a similar experience with unchecked, rapidly expanding imports of peanut butter/paste from Canada that undercut demand for U.S. food peanuts. Those imports were subsequently capped under provisions in the Uruguay Round Agreement. However, imports from Mexico are not limited in quantity, provided the peanut butter is made from peanuts that are of Mexican origin.

After considering historical trends in U.S. total edible peanut use as well as other factors likely to affect the demand for U.S.-origin peanuts for domestic food use, USDA anticipates the 1999 national peanut poundage quota to increase 1-5 percent from the 1998 level. USDA will announce the final 1999 quota by December 15, 1998.

In late 1998, domestic food use of U.S. peanuts appears to be on the rebound. However, history has clearly demonstrated that the marketplace can be very fickle. The issue of peanut allergies may cut into U.S. peanut consumption in the short run, but research is underway to develop a peanut in the next few years without the allergen. The recent appearance of peanut butter/paste imports from Mexico, which are under no quantity restrictions, are potentially the most serious challenge for the U.S. peanut industry in the immediate future. The U.S. food peanut industry must continue to promote its product in order to expand the market sufficiently to allow for growth in domestic production while absorbing larger imports.

Scott Sanford, Farm Service Agency (202) 720-3392
scott_sanford@wdc.fsa.usda.gov **AO**

December Releases—USDA's Agricultural Statistics Board

The following reports are issued electronically at 3 p.m. (ET) unless otherwise indicated.

December

2	*Broiler Hatchery*
3	*Dairy Products*
	Egg Products
	Poultry Slaughter
4	*Dairy Products Prices (8:30 a.m.)*
	Basic Formula Milk Price (Wisconsin State Report) (8:30 a.m.)
9	*Broiler Hatchery*
11	*Dairy Products Prices (8:30 a.m.)*
	Cotton Ginnings (8:30 a.m.)
	Crop Production (8:30 a.m.)
15	*Milk Production*
	Potato Stocks
16	*Broiler Hatchery*
	Turkey Hatchery
18	*Dairy Products Prices (8:30 a.m.)*
	Agricultural Chemicals, Restricted Use Summary
	Cattle on Feed
	Cold Storage
21	*Chickens and Eggs*
23	*Cotton Ginnings (8:30 a.m.)*
	Broiler Hatchery
	Catfish Processing
	Livestock Slaughter
24	*Dairy Products Prices (8:30 a.m.)*
29	*Hogs and Pigs*
	Peanut Stocks and Processing
30	*Agricultural Prices*
	Broiler Hatchery
31	*Dairy Products Prices (8:30 a.m.)*

The Western Rail Service Crisis: One Year Later

In the summer of 1997, the Union Pacific Railroad (UP) suffered a cascading service failure that snarled traffic and brought freight shipments in some areas to a complete halt. It proved to be the beginning of the worst rail service crisis in 20 years (*AO* March 1998). Early optimism that the service problems might quickly be resolved proved premature, and only since mid-August 1998, after more than a year of substandard service, has rail service in the western U.S. returned to stability. But many steps taken by UP early in the crisis, although slowing its recovery in the short term, will add to overall rail capacity in the western U.S. for many years to come.

The recent improvements in rail service should allow carriers to handle the 1998 grain and soybean harvest, which promises to be the largest in history. Yet despite the UP recovery and overall improvements in rail service in the western U.S., grain shippers this fall encountered many of the same storage problems experienced last year.

Bumper crops of grain and soybeans have combined with large carryin stocks to push grain storage capacity beyond its limits in many regions. Particularly hard-pressed for storage are areas in the Corn Belt and corn-producing regions of the Northern and Central Plains. This fall's ground piles of grain, however, are not the result of transportation snags but of large crops, worldwide economic problems, and increased competition that have reduced demand for U.S. grain, particularly at Pacific Northwest export facilities.

UP's service problems in 1997 originated in the Houston/Gulf Coast region, which elicited little surprise among those in the rail and grain industry familiar with operations in that area. Houston is a key node in the U.S. rail network, with direct links to Los Angeles, Kansas City (via Dallas/Ft. Worth), St. Louis, Chicago, New Orleans, and the Mexican border crossings, and Houston has long been considered one of the most troublesome spots in the U.S. rail network. A congestion problem similar to the 1997/98 event occurred there in 1978.

Rail traffic patterns in the Houston region are complex and difficult to manage because Houston's importance is threefold: the region is at once a key transit point in the U.S. rail network, a critical port, and home to many important petrochemical facilities. Consequently, Houston originates a significant amount of rail traffic (particularly chemical traffic), terminates a considerable volume of traffic (particularly agricultural traffic), and serves as an important transit point for other traffic.

The extent of rail traffic moving to, through, or from Houston make the configuration of rail infrastructure in the Houston/Gulf Coast region both complicated and fragile. It is complicated by virtue of geography and because much of this rail complex was developed somewhat haphazardly at a time when Houston was far less important to the U.S. rail network. It is fragile because for many years the financial weakness of the Southern Pacific Railroad (SP) prevented that firm from making investments in the Houston area that might have prevented or mitigated some of the problems seen last year.

Problem Solving: One Step Back, Three Steps Forward

The noticeable improvement in UP's rail operations starting in mid-August 1998 came just in time to handle the 1998 fall harvest shipments. Two key factors laid the foundation for recovery in the troubled western region. First, the market found alternatives to UP's service. Second, slowly but doggedly, UP pulled itself together by simply going about its business, unifying its operations after the merger with SP (approved in 1996), and investing in much-needed capacity expansion.

At the height of the rail service crisis, many western livestock and poultry feeders shifted to truck transportation for their feed supplies. For example, poultry feeders in Arkansas and east Texas trucked their feed products and grains from inland river points or from as far away as Missouri and Iowa. Western Plains hog feeders and California feedlot operators scrambled to secure steady supplies of feed grains and feed ingredients normally delivered by rail. Trucking grain such long distances is a short-term measure. In a longer term development, shippers have turned away from UP, which has lost significant market share to its principal competitor, Burlington Northern Santa Fe (BNSF).

The rail service recovery was also facilitated by the working out over time of UP's service recovery plan. Key elements were the implementation of the UP/SP merger and the investment of significant funds by

UP to undertake much-needed capacity expansions in several critical locations.

Conventional wisdom suggests that the merger of UP and SP caused the service failure in Houston. Conventional wisdom could be right—many railroad observers believe that UP failed to listen to SP personnel who had critical knowledge of the yard operations in Houston. But it could be wrong—while the service failure occurred after the merger was approved, it began before UP and SP actually combined operations in the Houston area. SP's facilities were inadequate, and a breakdown in Houston may have been inevitable.

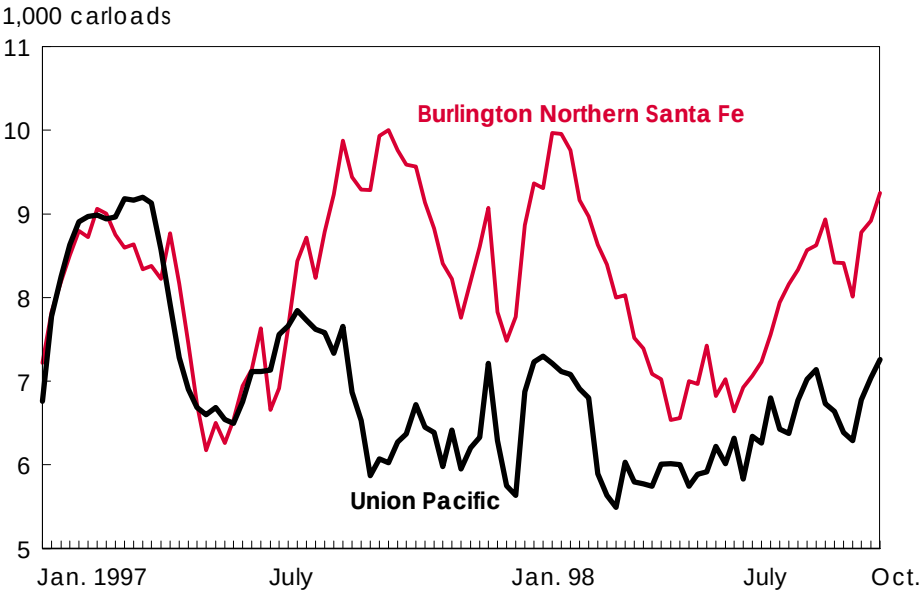
In any case, some of the steps UP took to implement the merger and restore service in the long run initially intensified short-term problems. For example, after a period of recovery in January 1998, UP implemented directional running operations across its Southern Tier. Prior to the merger, the two railroads had a number of parallel lines running across eastern Texas, Arkansas, and southern Missouri. UP switched several of these single-tracked mainlines, which had previously handled two-way traffic, into "one-way-only" service lanes.

Directional running increases system capacity by improving both train speed and yard efficiency, and was anticipated to be one of the primary benefits of the UP/SP merger. However, when UP implemented the system, the result was almost disastrous. Because former SP engineers were new to the UP lines, just as UP engineers were unacquainted with the former SP lines, UP's locomotive crews needed to be trained and certified on these unfamiliar routes. This training disrupted rail operations and reduced the number of crews available for duty, and service tumbled to unacceptably low levels.

UP also integrated the SP into its computer system during the crisis. Railroads are sophisticated users of information technology, and rail operations as diverse as crew calling and train dispatching depend on a railroad's information and telecommunications technology. UP integrated the SP into its computer-driven Transportation Control System (TCS) in four phases. Disruptions occurred in each case as trains operating on the SP system were stopped and information on their locations, along with the contents and routing instructions of each carload, was entered into UP's main computer system. The last (and largest) of these TCS "cutovers" began July 1, 1998, when the remaining SP lines in the West were folded into UP's operations. Shortly after this TCS cutover, USDA received numerous complaints from agricultural shippers in California. But again, the short-term pain associated with this step was needed to integrate UP/SP operations and restore rail service to normal levels.

UP's service woes demonstrated that its infrastructure could not adequately handle major disruption or anticipated traffic growth. An aggressive capital spending campaign aimed at increasing system capacity laid the groundwork for UP's recovery while complicating it in the short-term. UP expects to spend $400 million on merger-related capital projects in 1998; much of this investment is in the Houston/Gulf Coast region where UP intends to spend some $600 million over the next 3-5 years. In addition to these merger-related capital investments, UP invested an additional $400 million during the summer of 1998 in a massive track maintenance and capacity expansion project on its Central Corridor between Chicago and Utah.

Union Pacific Lost Market Share of Grain Shipments in 1997



Weekly carloadings (3-week centered average) for western railroads.
Source: Association of American Railroads.

Economic Research Service, USDA

Although these capital investment projects will provide the infrastructure needed for better service in the years ahead, their initial implementation slowed UP's service recovery this spring and summer.

Only since mid-August 1998 has UP's service returned to normal. UP's terminal performance, grain car movements, and train velocity have all improved in recent weeks, and several weather-related disasters confirm that UP's "recoverability"—its ability to handle unanticipated problems with only minor disruptions—has improved markedly.

A case in point was UP's handling of the effects of Tropical Storm Charlie, which produced severe flooding in the Rio Grande Valley in late August. UP's crucial Sunset Line from Houston to Los Angeles was washed out in three dozen places in Texas, yet UP was able to reroute most of its trains over other lines during track repairs. Service was restored within 2 days. Had floods of this magnitude occurred 3 or 4 months earlier, most analysts believe that UP's Texas operations would have been crippled. In March 1998, problems at the border had halted UP trains as far away as Kansas and forced UP to embargo traffic to Laredo.

Transportation

But in the aftermath of Tropical Storm Charlie, which forced the U.S. Customs Service to shut down all international trade by rail and road at the Laredo gateway, traffic resumed without difficulty once floodwaters ebbed. More recently, UP has responded to additional weather crises, including Hurricane Georges, severe flooding in Texas, and heavy rains in the middle regions of the country. So far, UP has maintained and even improved rail service to most shippers during these weather disruptions.

Fall Situation for Grain Shippers & Railroads

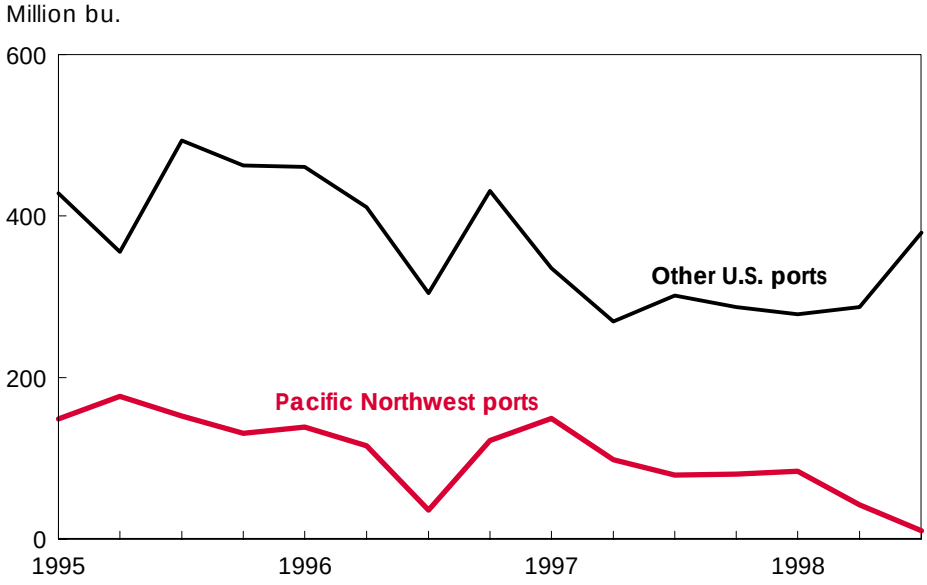
The situation for midwestern grain shippers this fall is, in some ways, much like last year. Excellent grain and soybean crops have left many country elevators and subterminals piling grain on the ground as available storage capacity was again pushed beyond its limits. This year's grain piles, however, have almost nothing to do with rail transportation problems, but resulted from bumper crops and slack export demand for U.S. grains and soybeans. Particularly hard hit are the Northern and Central Plains and the western growing areas of the Corn Belt. Lack of demand for midwestern grain at Pacific Northwest ports is affecting shippers and producers in these regions, as well as the two western railroads—BNSF and UP—that serve this market.

U.S. production of grains (excluding rice) and soybeans for the 1998/99 marketing year is forecast to be an all-time record at 16.2 billion bushels, up 3 percent from last year and 13 million bushels higher than the previous record in 1994/95. With large carryin stocks, this year's available supplies are the largest since the mid-1980's. September 1 stocks, at 4.4 billion bushels, were up 22 percent from a year ago and the largest since 1993. This year's September stocks also mark the third consecutive year in which grain and soybean stocks have grown, gradually adding to the demand for storage at a time, when storage capacity has been trending downward, at least up until this year.

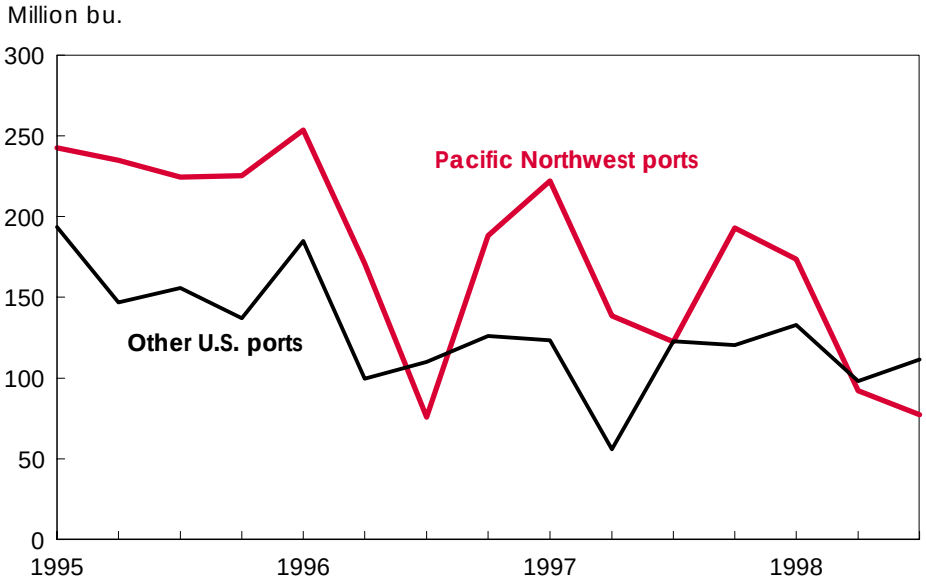
From December 1, 1987 to December 1, 1997, U.S. grain storage capacity has consistently been on the decline, falling more than 4.4 billion bushels to 18.9 billion in 1997. Most analysts, however, anticipate that storage capacity will have expanded during 1998 when USDA's National Agricultural Statistics Service releases storage capacity numbers for December 1, in its January 1999 *Grain Stocks* report. Even so, September 1 stocks and fall production (corn, sorghum, and soybeans) in the Central Plains and eastern and western Corn Belts reached or surpassed available storage capacity, forcing elevators and farmers to scramble to put grain into temporary storage or ground piles. Low harvest-time prices and a weak basis (difference between futures market price and local cash price) have also encouraged farmers to hold grain at least into the early months of 1999, adding to the demand for storage.

While many producers continue to hold grain in anticipation of higher prices,

Corn Export Inspections Have Declined at Pacific Northwest Ports . . .



. . . Reflecting Lower Rail Shipments of All Grain for Export



Quarterly data based on carloads (100 short tons and average bushel weight of 58 pounds).

Economic Research Service, USDA

projected grain and soybean use for 1998/99 suggests that processors, millers, feeders, and exporters will demand more grain this marketing year than last. Domestic use for 1998/99, projected at 11.8 billion bushels, would be up 2 percent from last year and an all-time high. Export use this marketing year, while not a record, is also projected up 5 percent from last year at 3.9 billion bushels. If these projections hold, 1998/99 grain and soybean use would total 15.7 billion bushels, just 6 million bushels short of the 1994/95 record.

Domestic commodity demand is driving demand for rail grain transportation, which has strengthened throughout calendar year 1998. Grain carloadings on U.S. railroads during the first two quarters of 1998 were down 6 percent from the same period in 1997 and 11 percent from 1996. Third-quarter grain carloadings this year, however, were up 2 percent over third-quarter 1997 and 11 percent over 1996.

Grain carloadings have increased substantially with the beginning of the fourth quarter, although carloadings through October continue to be down 2 percent from last year. As the fall harvest shipping season went into full swing, grain loadings, which had averaged 22,100 cars per week for the first three quarters, jumped to an average 26,400 cars weekly for October. This upswing is consistent with the normal seasonal pattern of grain shipping, but this year's October numbers are running ahead of last year by 3 percent and ahead of the same weeks in 1996 by 6 percent.

It was strong demand for rail-delivered grain in the eastern U.S., however, that kept grain carloadings nationwide from falling well below last year's levels. As a group, the major eastern railroads—Conrail, CSX Transportation, Illinois Central, and Norfolk Southern—have reported grain carloadings up each quarter over the same quarters in 1997. In contrast, the major western railroads—BNSF, Kansas City Southern, and UP—have experienced losses in grain carloadings as a group every quarter so far this year compared with last year. Driving these losses in rail grain traffic in the western U.S. is the loss of demand for grain from the upper Midwest and Plains at the Pacific Northwest export facilities along the Columbia River in Oregon and Washington, and on Puget Sound in Seattle and Tacoma, Washington.

Rail shipments of grain for export so far in 1998 have been down nationally for the third straight year. Carloads of grain shipped to export position from January through October were down 12 percent this year from 1997, down 21 percent compared with 1996, and down 42 percent from 1995. The loss in export rail grain demand has occurred despite stronger-than-expected demand for export wheat at the Texas Gulf. While shipments to Texas Gulf ports have been up 17 percent from 1997, shipments to the Pacific Northwest have been down 30 percent.

The impact of the loss in the Pacific Northwest export rail market is substantial for shippers and producers in the western reaches of the corn belt in Nebraska, southwestern Minnesota, and eastern North and South Dakota. It has also resulted in a serious loss in rail grain traffic for the two carriers—BNSF and UP—serving this market. Rail shipments to the Pacific Northwest accounted for 60 percent of all export rail shipments during 1995-97. Export rail shipments to the next-largest export rail market—at the Texas Gulf—during the same years were roughly half the volume shipped to Pacific Northwest facilities. But in third-quarter 1998, shipments to the Texas Gulf actually exceeded shipments to the Pacific Northwest.

Not only have financial problems in Asian importing countries reduced demand for U.S. grain, but they have also reduced total waterborne commerce trade in the Pacific sea trade lanes, which has led to a surplus of vessels (*AO* May 1998). As a result, ocean freight rates for grain shipments to Japan from U.S. Gulf ports, for example, are down 44 percent from the previous three-year average. Ocean rates from Pacific Northwest ports, on the other hand, have not fallen as far, narrowing the ocean rate differential between Gulf and Pacific Northwest ports enough to make Gulf ports an attractive option. Since shipping midwestern grain by rail to the Pacific Northwest is generally more expensive than by barge to the Gulf, the lower ocean freight rate differential leaves grain exporters little incentive to book sales from Pacific Northwest ports. Until that differential widens, shipments through the Pacific Northwest are likely to remain at current low levels, keeping rail transportation demand in this corridor well below normal levels and reducing grain transportation demand on BNSF and UP.

The drop in rail volumes to the Pacific Northwest has occurred largely because of reduced demand for the export of corn from these ports. So far for 1998, Pacific Northwest ports have accounted for only 13 percent of total corn exports, compared with 24 percent during 1995-97. While total U.S. corn exports through September 1998 were down 12 percent from last year, Pacific Northwest corn exports plummeted by 58 percent for the same period. U.S. corn exports have tended to level off since the second quarter of 1997 and even turned up somewhat in the third quarter of 1998, but Pacific Northwest corn exports have continued to fall.

Contrast with earlier years is even more dramatic. Export inspections of corn at Pacific Northwest facilities totaled 478 million bushels during the first three quarters of 1995 but reached only 137 million bushels for the first three quarters of this year. The difference between the volume of corn exported from the Pacific Northwest in the first 9 months of 1995 and the first 9 months of this year is roughly the equivalent of 100,000 rail carloads of grain or 2,564 additional carloads per week for BNSF and UP, the two railroads that serve this port region. Had volumes remained the same in 1998 as they were in 1995, grain traffic for these two railroads would have been 17 percent higher through September this year.

Lack of demand for midwestern grain at Pacific Northwest ports hurt not only shippers and producers who rely on this market, but also the UP and BNSF. Last year these railroads struggled to meet shipper demand; this year their grain business has suffered from lack of export demand in the Pacific Northwest market.

William J. Brennan (202) 690-4440 and Jerry D. Norton (202) 720-4211, Agricultural Marketing Service
William_J_Brennan@usda.gov
Jerry_D_Norton@usda.gov **AO**

Dana Downie, Foreign Agricultural Service

Indonesia's Financial Crisis: Implications for Agriculture

After years of rapid growth, poverty reduction, and political stability, Indonesia slipped into a deep economic crisis in 1997-98. Triggered by a regional financial crisis that began in Thailand in July 1997, Indonesia's sudden economic collapse had several contributing factors, including a rapid increase of short-term, private debt and a weakly regulated banking system.

The economic chaos has cut U.S. agricultural exports to Indonesia by over half, from $639 million in January-September 1996 (before the crisis) to $312 million during the same period in 1998. By itself, Indonesia is not a large market for U.S. agricultural exports, which totaled $57.2 billion in calendar year 1997. However, it is one of several countries in Asia caught up in this regional crisis.

Indonesia and its ailing Southeast Asian neighbors, together with South Korea, accounted for 16 percent of the increase in U.S. agricultural exports from 1990 to 1996. During this period, annual growth of U.S. agricultural exports was 11 percent for this group of countries compared with 7.3 percent for the world.

Drought & Currency Devaluation Generate Social Unrest

Indonesia's economy was placed in a precarious financial position partly because of the borrowing practices of Indonesian companies. The World Bank estimates that from 1995 to the beginning of the regional crisis, private firms were saving 9-11 percent on the cost of loans by borrowing in foreign currencies without protection from currency devaluation. These firms assumed that the government's exchange rate controls would protect them from this risk.

But when it became too expensive for the government to defend the country's currency in August 1997, the *rupiah* began depreciating. The exchange rate spiraled out of control beginning in late 1997 as foreign investors panicked and started withdrawing their funds. At the same time, local firms with foreign borrowings began selling rupiah to purchase enough foreign currency to cover their principal and interest payments, furthering the rupiah's decline.

As the rupiah depreciated, the foreign debt of these local firms soared to levels far exceeding their debt repayment capacity. The country's banking sector froze, unwilling either to provide the short-term financing needed for operating capital or to open letters-of-credit for imports of raw materials and intermediate inputs some industries needed to operate. Businesses began shutting down and unemployment began rising.

The financial crisis hit when the country was being subjected to one of its worst droughts in 50 years. The El Niño-induced drought lowered production of food, including rice, the staple. Food shortages and the inflationary pressure from devaluation led to rapidly rising food prices. As prices for food and other necessities soared and unemployment increased, the buying power of large segments of the population eroded. Social unrest erupted in May 1998, ending the 32-year Suharto presidency. Given the depth of current economic and related problems, positive economic growth is unlikely to resume within the next 2-3 years.

All Categories of U.S. Ag Exports to Indonesia Are Sharply Below Pre-Crisis Levels

	1996	1998	Change 1996-98
	$ million		*Percent*
Cotton fiber and linters	203.4	116.8	-43
Soybeans	153.7	98.4	-36
Fruits, vegetables, and nuts	43.4	9.7	-78
Wheat and products	67.6	22.4	-67
Meat, poultry, and dairy products	52.8	13.0	-75
Corn	32.5	0.2	-99
Soybean meal	14.5	11.7	-19
Other	274.5	156.8	-43
Total	639.0	312.2	-51

January-September.

Economic Research Service, USDA

To deal with the financial crisis, the Government of Indonesia (GOI) and the International Monetary Fund (IMF) established a framework of reforms for an IMF loan to Indonesia in a series of agreements in late 1997 and early 1998. The reforms in the agreement directly affecting agriculture included eliminating the import monopoly of Indonesia's National Logistics Agency (BULOG) as well as subsidies for wheat, wheat flour, sugar, soybeans, and garlic. Other measures involved reducing import tariff rates on all food items to a maximum of 5 percent, deregulating trade in agricultural products across district and provincial boundaries within the country, and removing all formal and informal barriers to investment in palm oil plantations.

The consequences of the financial crisis and the drought for Indonesians have been uneven. Many farmers are benefiting from higher export demand for their produce with the devaluation of the country's currency, and farmers outside the drought areas are receiving higher prices for food crops. The urban poor are most affected by food shortages and high food prices.

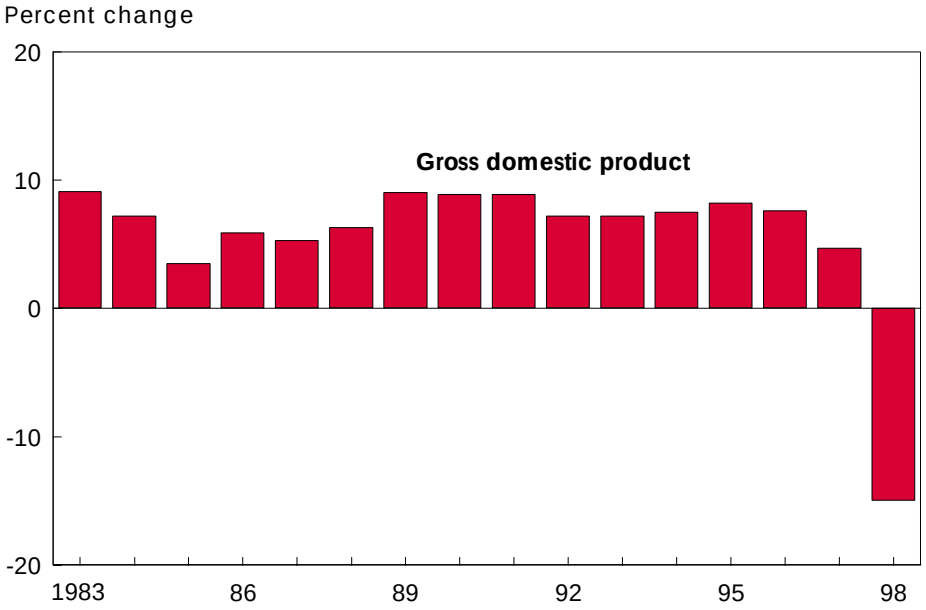
Among the U.S. exports affected by the Indonesian crisis, the largest dollar-value reductions are in cotton fiber and soybeans, the leading U.S. exports to Indonesia. Percentage value losses are greatest for U.S. exports of corn used in livestock feeding and for the higher-valued livestock and horticultural products.

Crisis Slows Textile Industry

Little cotton is grown in Indonesia because it is not able to produce competitively. However, the abundant availability of low-cost labor has been the basis for the rise of a large spinning and textile industry, turning out products for its domestic market and for export. Indonesia had become one of the world's largest importers of cotton fiber and has been a top-five importer of U.S. cotton in recent years.

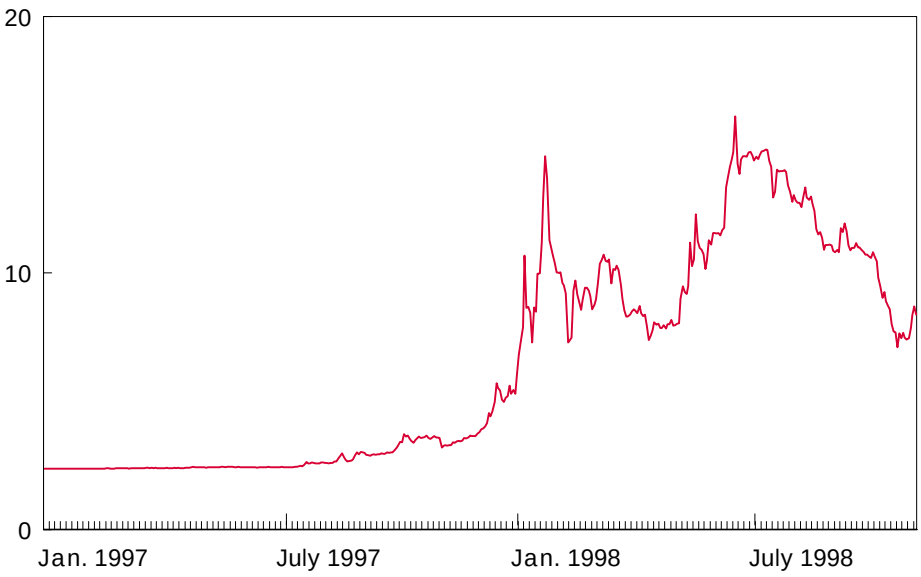
Though Indonesia's textile exports have increased with its currency devaluation, overall textile production has decreased. With the onset of the financial crisis, domestic purchases of textile products dropped more than exports increased.

Indonesia's Economy Collapsed After Years of Fairly Steady Growth



Inflation-adjusted. 1998 forecast.
Economic Research Service, USDA

Weak Currency Values Have Plagued Indonesia in 1998

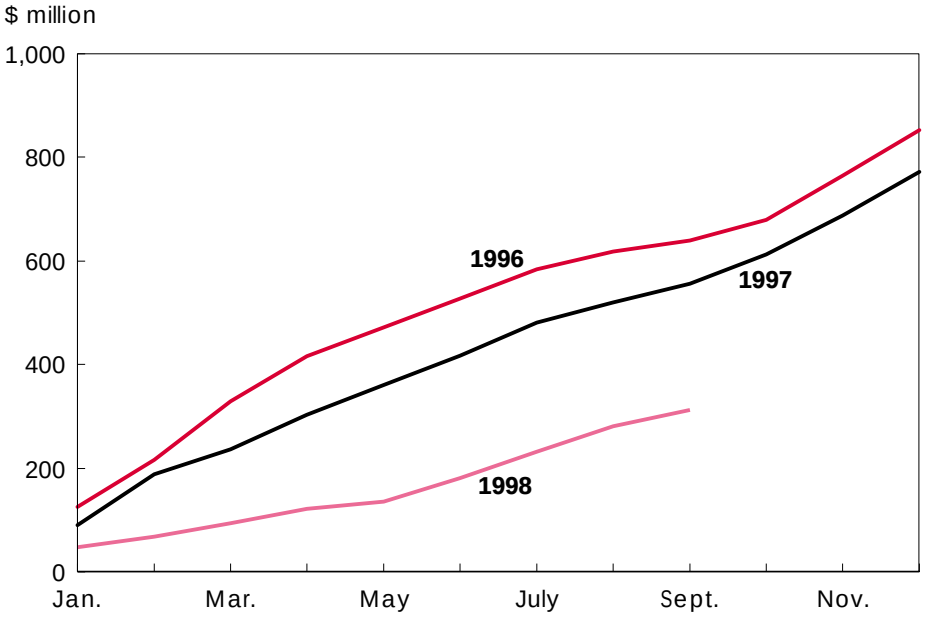


Source: Pacific Exchange Rate Service.
Economic Research Service, USDA

Several large and medium textile mills have offset the loss of domestic sales by increasing their exports from 60-70 percent of output to as much as 95 percent of output. Indonesia's key competitors in textile trade include Pakistan, India, the Philippines, and Malaysia.

The volume of Indonesia's cotton fiber imports have dropped significantly with the crisis. Many spinning mills have

U.S. Agricultural Exports to Indonesia Are Down Substantially in 1998



Cumulative exports.
Economic Research Service, USDA

closed, unable to import cotton fiber due to the difficulty in opening letters-of-credit, the lack of short-term credit for operating capital, and the sharply devalued Indonesian currency which made imports far more expensive. In addition, production costs have been rising as the minimum wage was raised, interest rates increased, and the cost of water and electricity rose. Currently it is estimated that only 4-4.5 million spindles (for thread making) are in operation, down from a total of 6-7 million spindles installed.

With the worsening of the crisis in 1998, Indonesia has increased its use of USDA's GSM-102 program for financing cotton imports. Registrations for the first 10 months of fiscal year 1998 are approaching a record $35 million, up from the fiscal 1997 total of $13 million. However, Australia has become a more competitive cotton exporter to the Indonesian market compared with the U.S., with the 25-percent devaluation of the Australian dollar against the U.S. dollar since March 1997. The U.S. and Australia were the leading suppliers of cotton to Indonesia in the 1995/96 marketing year (beginning August) with shares of 36 percent and 21 percent. Australia replaced the U.S. as the number-one supplier in 1996/97 and will likely remain at the top in 1997/98.

Demand Drops for Soybeans, Wheat, & Feedstuffs

Soybeans are an important protein source for many lower income Indonesians and contribute 15 percent of the protein consumption in the country. The two principal soy foodstuffs are tempeh (fermented soybean cake made using whole soybeans) and tofu. These soybean products are a more affordable source of protein than livestock products. Domestically grown and imported soybeans are used only for food. Soybean meal required for livestock feeding is entirely imported. Soybean production is not well suited for Indonesia's climate.

As soybean prices rose and incomes fell with the onset of the crisis, a decline in soybean consumption by low-income consumers has been offset by middle-class consumers switching from livestock products to soybean-based protein sources. Nevertheless, Indonesia's total soybean imports have fallen. U.S. soybean exports to Indonesia are off 36 percent in January-September 1998 from the same period in 1996. With economic recovery, sales to Indonesia are expected to continue only at or slightly above current levels in the near term, given that establishing an efficient process for private sector imports will likely take some time.

In the longer term, imports should expand as consumption gains once again outpace production increases. Indonesia's recent liberalization of soybean imports as part of the IMF loan arrangement will encourage soybean trade. As a result of liberalization, a cooperative of soybean product producers—Indonesian Tahu and Tempeh Producers Cooperative—reportedly plans to start importing soybeans monthly beginning in January 1999 under USDA's GSM-102 export credit program.

Wheat consumption and imports will be sharply lower the next 3-5 years until consumer incomes recover. All wheat consumed in Indonesia is imported because the crop is not well suited to Indonesia's tropical climate.

In the past, BULOG controlled virtually all aspects of the importation, distribution, and pricing of wheat. Now that wheat imports have been liberalized, Indonesia will offer post-recovery opportunities for commercial sales of U.S. wheat in a market that has been dominated by Australia and Canada in the past. The largest usage of wheat flour (60 percent) is for making instant noodles. The baking industry takes an additional 30 percent of flour, and biscuit manufacturers use the remaining 10 percent. When Indonesia purchases U.S. wheat in the future, it will likely include soft white wheat for confectionery products and for noodles.

Soybean meal and *corn* usage plummeted with the collapse of Indonesia's poultry production, which consumed more than 90 percent of the country's manufactured feed before the crisis and was the largest and fastest growing Indonesian livestock sector. Poultry producers faced a profit squeeze due to reduced consumer demand from the economic slowdown and escalating feed costs following the currency devaluation. The crisis also sharply reduced the availability of short-term credit for poultry producers, and the poultry industry may decline even further in 1999 if economic conditions remain unchanged or worsen.

From 1985 to 1997, broiler output had been expanding at an annual rate of 13.6 percent. Broiler production is now only 30-40 percent of the pre-crisis level of 13-14 million birds per week. Egg production is also just 30-40 percent of the pre-crisis level (1,800-2,000 tons per day).

Indonesian soybean meal imports declined to 430,000 metric tons in marketing year 1996/97 (beginning October) from a year-earlier level of more than 1.1 million metric tons. India has been the predominant supplier of soybean meal to Indonesia, followed by Brazil. U.S. corn exports to Indonesia have essentially evaporated, declining from $32.5 million in January-September 1996 to less than $200,000 in 1998.

Prior to the crisis, the poultry industry's rapidly increasing feed requirements for corn had started to outpace domestic corn production, and corn imports had begun to rise. But with the onset of the crisis, Indonesian corn importers began exporting corn to Malaysia and Thailand. Corn imports are expected to resume only when the poultry industry begins to recover.

It may take 4-6 years before the Indonesian poultry industry returns to its former scale. The pace of recovery will be determined by recovery of the country's economy, reform of its financial systems, and growth in consumer income.

Drought Hurts Rice & Palm Oil Production

Near self-sufficiency in *rice* has long been a strategic objective of Indonesian agricultural policy. However, BULOG generally purchases rice in international markets to offset production shortfalls. To offset crop losses due to the El Niño-related drought, Indonesia is expected to import a record 5.7 million tons of rice in calendar year 1998, almost one-fourth of total world rice trade and the largest amount of rice ever imported by a single country. Thailand and Vietnam have supplied the bulk of Indonesia's imports, with China and Pakistan also selling significant quantities.

This year has demonstrated that even small production shortfalls (less than 5 percent in 1997/98) in a country that is a major consumer of rice can lead to substantial imports relative to the world rice market. Rice production in 1998/99 is expected to rebound with the ending of the drought, so imports will likely drop back to previous levels.

Future rice policy is still uncertain as IMF and the Government of Indonesia continue discussions. Apparently, BULOG will continue to stabilize domestic rice prices with imports and procurement/distribution of domestic rice.

The drought also reduced *palm oil* production in Indonesia, and in neighboring Malaysia, the world's two largest exporters of palm oil. Now that the drought is over, palm oil production should begin recovering with the next crop production cycle which begins in March 1999.

As the crisis deepened in early 1998, the price of cooking oil rose very rapidly. The GOI tried various restrictions on palm oil exports in an effort to limit domestic cooking oil price increases. More recently, the GOI substituted export taxes for the export restrictions on crude palm oil and on some of its byproducts to as high as 60 percent, to encourage producers to direct more products toward the domestic market.

These efforts by the GOI to curtail exports, combined with the general financial uncertainty for the near term, may have limited the expansion of the palm oil sector this year. The Indonesian Palm Oil Producers Association reports that planting of new seedlings has fallen to about 75 percent of the normal annual level. The impact of this slowdown in plantings will not be immediate because palm trees do not begin oil production for 5-6 years.

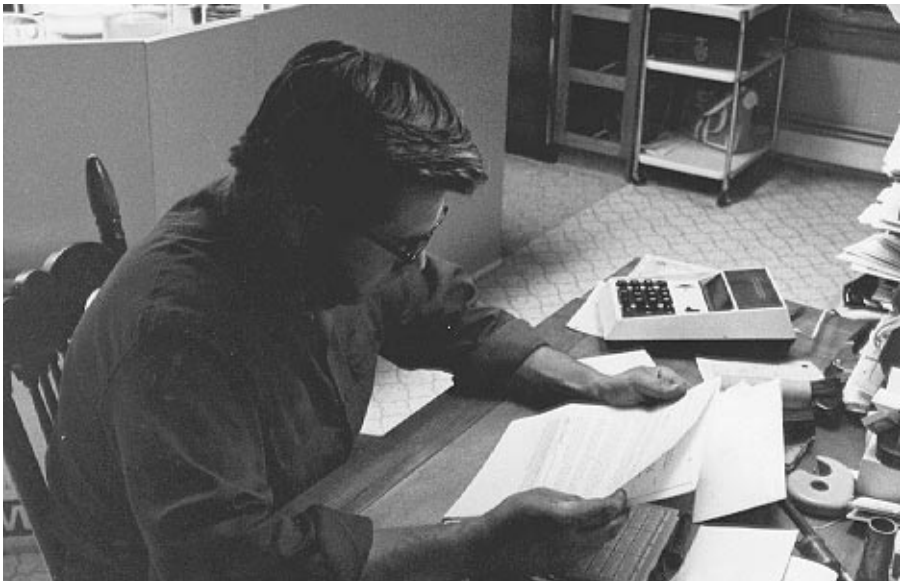
The financial crisis that swept through the Southeast Asia region has affected Indonesia more than its neighbors. The slowdown in U.S. agricultural exports to Indonesia has been uneven across commodities. U.S. exports to Indonesia are expected to resume growing when the economy turns around, but the growth will likely be slower than in the recent past.

Gary Vocke (202) 694-5241
gvocke@econ.ag.gov AO

Easing the Impact on Indonesia's Poor

Since Indonesia's economic and weather problems began in 1997, the number of people in poverty has increased sharply. To assist the growing number of poor, the Government of Indonesia has expanded a targeted program through the National Logistics Agency (BULOG) that provides 10 kg of subsidized rice per month to poor and near-poor households. (The Food and Agriculture Organization of the UN estimates that the country's population of 203 million consumes an average of 149 kg of rice per person annually, compared with 24 kg of corn and 19 kg of wheat.) This subsidized rice program is now reaching several million households. The government has also set up food-for-work projects in drought-stricken areas.

The U.S. government is also providing food assistance to Indonesia during this crisis with a $52-million package under the P.L. 480 Title II program. The grant includes 73,482 tons of rice, 314 tons of corn-soybean blend, and 11,040 tons of wheat-soybean blend for arrival from August through December. An additional donation of wheat under the Section 416(b) program totaling 500,000 metric tons is being prepared for delivery over the next several months.



The 1997 Tax Law: New Incentives for Farmers To Invest for Retirement

The investment goals of farmers increasingly include retirement planning as well as building the farm business. Good retirement planning requires allocating limited financial resources to preserve an acceptable standard of living during retirement. Farmers historically relied on farm assets to build their business *and* provide income during retirement. Tax-advantaged plans such as Individual Retirement Accounts (IRA's) or Keogh plans encourage off-farm diversification but frequently compete with farm investment decisions that promote economic viability of the farm operation.

Recent changes under the Taxpayer Relief Act of 1997 offer new opportunities at a time when farmers have several motives for diversifying total assets beyond the farm. Individual farm income may be more variable following the decoupling of farm payments from production and prices in the 1996 Farm Act. Also, income variability may contribute to land price volatility, creating more uncertainty about the future value of this major asset. Furthermore, uncertainty about the future level of Social Security benefits increases the motivation for prudent financial planning.

The tax law changes, in effect, offer conflicting incentives for farmers, perhaps more so than in the past. While plans such as IRA's offer new tax benefits, lower capital gains tax rates reaffirm farmers' inclination to reinvest in farm assets such as land and breeding or dairy livestock. The investment incentives in the new tax law are likely to increase overall investment but to generate relatively little additional diversification into off-farm assets, given the historical investment preferences of farmers.

How Farmers Have Planned

Many farmers' retirement strategies focus on investments that expand or improve the farm operation, with the intent to rely on farm assets for retirement income. Some also plan to transfer those assets to a family member who will continue to farm, or to other heirs who may be less interested in the farm business because of a nonfarm occupation. Balance sheets of the farm sector suggest that diversification among broad asset classes is limited for farm households. Financial assets comprise only about 7 percent of total assets, while real estate represents about 70 percent. This reflects the comfort level that farm assets provide many farmers.

Off-farm diversification of household assets is often recommended as a means of reducing risks and as a consideration in structuring some estates. Farm resources alone also may be insufficient for living expenses of more than one household if retirement reduces the amount of labor available to operate the farm. Farm equity may be particularly at risk, especially if it is concentrated in farmland.

Preferential capital gains tax treatment has been very important for farmers, especially given the capital-intensive nature of farming. Many farm assets qualify for capital gains treatment, including farmland and other real estate, and breeding and dairy livestock which are frequently culled to maintain a productive herd.

About one-third of farm sole proprietors report capital gains income in any given year, three times the frequency for all other taxpayers, and twice that for other small businesses. About two-thirds of dairy farms and about half of other livestock operations report capital gains income each year. While not explicitly a retirement investment, buying additional farmland or expanding a breeding herd may serve as a de facto retirement account by dominating a farmer's asset base and by competing with alternative nonfarm uses of investment funds.

Some taxpayers are clearly motivated by tax incentives for retirement savings, but many do not take advantage of the opportunity. While farmers are more likely than other taxpayers to use IRA or Keogh plans, roughly 9 out of 10 fail to contribute during any given year, and at least one-third may not have any such accounts. Farmers use individual retirement incentives more frequently than other taxpayers because they are more likely self-employed. In a 1995 Federal Reserve survey, about 42 percent of farmers reported having an IRA or Keogh account, compared with 25 percent of the nonfarm population. Another survey

USDA does not endorse any particular retirement plan.

indicated that two out of three large-scale midwestern crop farmers had tax-deferred retirement plans. But only 10 percent of farm sole proprietors contribute to IRA or Keogh plans in any given year, according to IRS data (still higher than the 6 percent of the nonfarm population making contributions).

Despite an apparent overall lack of diversification in assets, farmers and landlords over age 65 receive many different sources of taxable income, according to IRS aggregate tax data. Social Security benefits and distributions from IRA's/pensions each comprise about one-sixth of aggregate income for these older farmers and landlords. But only a half to two-thirds receive income from these sources. Interest and dividend income is even more important for many retirees, comprising about one-fourth of the group's total income. Together, these figures suggest considerably more diversification than balance sheets, partly because the value of Social Security and some pension benefits is rarely included as an asset. Yet, individual retirees may not have the breadth of diversification as suggested by aggregate income, since interest and dividends tend to be concentrated among the wealthier farmers.

IRA's, Capital Gains, & the 1997 Tax Law

IRA's are an attractive retirement planning tool because of tax savings over the life of the investment. However, an individual's total contribution to all IRA's is limited annually to the smaller of earned income or $2,000. The "classic" deductible IRA reduces taxable income (and taxes) in the year of the deposit, but the deduction may be limited for some employees who have a retirement plan at work. Distributions before age 59½ are taxed and generally subject to a penalty. When the money is withdrawn, it is taxed as ordinary income whether it represents principal or earnings.

The 1997 tax act allows employees who have a retirement plan at work to earn more income and still qualify for deductible IRA contributions. The adjusted gross income (AGI) on a joint return that triggers limits on deductibility is raised to $50,000 in 1998 and gradually increases to $80,000 by 2007. Spouses who do not have a retirement plan at work but are married to someone who does are no longer disqualified from deductible IRA's unless AGI exceeds $150,000.

With many farm families working in off-farm jobs, these changes are increasingly important for farmers. An estimated 300,000 additional farm households became eligible for deductible contributions beginning with the 1998 tax year.

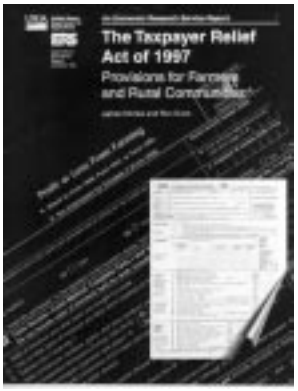
The 1997 law also created a new type of IRA–the nondeductible "Roth IRA" which allows tax-free earnings if funds are withdrawn after 5 years and the individual has reached age 59½, died, or become disabled. Contributions to Roth IRA's are phased out for couples with AGI exceeding $150,000.

Roth IRA's are also more flexible than traditional IRA's. Principal can be withdrawn without penalty before age 59½ or within 5 years, giving Roth IRA's an advantage if the farm household needs more liquidity. In addition, fund withdrawal is not required after age 70½ and contributions may continue to be made, allowing farmers to use Roth IRA's to store and build wealth for bequests. Nearly all farm households qualify for the new Roth IRAs.

Long-term capital assets such as farmland are viewed frequently as retirement savings, but are not eligible to be IRA's. However, capital gains have received special treatment in the tax code over the years, although less so from 1986 to 1997. Prior to the Tax Reform Act of 1986, 60 percent of capital gains was excluded from taxation and the remainder was taxed at ordinary tax rates. The 1986 act taxed gain on the sale of capital assets

Related Reading

The Taxpayer Relief Act of 1997
Provisions for Farmers and Rural Communities
Stock #AER-764



Issues in Agricultural and Rural Finance
Stock #AIB-724

To order call 1-800-999-6779. Toll free in the U.S. and Canada.

Available on the Economic Research Service web site
http://www.econ.ag.gov/epubs/pdf/aer764/index.htm (Taxpayer Relief)
http://www.econ.ag.gov/epubs/pdf/aib724/ (Issues)

at the same rate as ordinary income, except that a top marginal rate of 28 percent applied to gains from assets held longer than a year.

After the 1997 act, the maximum capital gains tax is 20 percent for assets held more than a year. A 10-percent rate applies to taxpayers in the 15-percent tax bracket (for example, joint returns with taxable income less than $42,350 for 1998). In addition, lower rates will apply beginning in 2001 for assets held more than 5 years. In contrast with treatment before the act, when only taxpayers above the 28-percent bracket benefited from the maximum rate on capital gains, the new array of capital gains tax rates offers all taxpayers some level of preferential treatment.

Besides investing for retirement, some households intend to transfer wealth to the next generation. For these farmers, estate tax considerations are also important. If the farm business is expected to continue within the family, provisions for special valuation and the new family business exclusion under the 1997 act encourage business investment because more of an estate can be transferred tax-free. Heirs also benefit from a long-standing provision that eliminates capital gains taxes on inherited property by allowing them to use the value of the decedent's property at death for purposes of determining future gains (i.e., a step-up in basis).

Impacts of the Tax Changes

The new opportunities for IRA's and reduced capital gains taxes encourage investment and savings for retirement, but the preferred investment choice varies among individuals and depends upon the tradeoff between paying taxes now or later. An investor with a regular taxable investment such as farmland pays taxes on profit as income is generated and on the capital gain only when the asset is sold. Money in IRA's, on the other hand, is taxed only prior to investment (i.e., Roth IRA) or when redeemed (i.e., deductible IRA), with all flows treated as ordinary income.

Analyzing investment options helps identify which ones would be most beneficial to the individual investor. The following results are based on a simulation that incorporates the tax effects on alternative investments held for 15 years. Because farmland and the S&P 500 stock market index (a proxy for IRA returns) have had fairly similar total returns and risks from the early 1960's to the late 1980's, a 10-percent annual total rate of return (capital gains plus reinvested earnings) is used for both. Also, they are both investments in equity that have had cyclical periods of gains and losses. Results from this analysis are based on long-term averages and are not necessarily representative of future or short-term trends.

Compared with regular taxable investments such as farmland, Roth and deductible IRA's clearly offer greater after-tax future values, about 25 percent more. This is especially true for longer holding periods when any of the return is a currently taxable dividend or interest that can grow tax-deferred in the IRA. However, if investors are concerned about IRA restrictions or have more to invest than allowed under the program, regular taxable investments such as farmland are increasingly attractive because of lower capital gains taxes.

Choosing between the two types of IRA's depends on an individual's marginal tax bracket in retirement relative to today. That is, does the farmer expect taxable income to change enough between now and retirement to move into a different tax bracket? Based on total longrun investment value, deductible IRA's are preferred over Roth IRA's if marginal tax rates are expected to fall substantially at retirement. Roth IRA's are better if tax rates are expected to rise. If the marginal tax rate is expected to remain the same in retirement as today and the investor has less than $2,000 to invest, Roth and deductible IRAs yield the same value after taxes in the long run. However, if investors have more funds, the Roth IRA yields a greater future value, because more pre-tax income receives preferential treatment under the Roth IRA.

Overall, investment by farmers should increase as a result of the investment incentives which became effective for the first full year in 1998. Provisions for IRA's and capital gains create complex tradeoffs, but both encourage additional investment. Deductible and Roth IRA's offer the greatest after-tax return. But lower capital gains tax rates encourage more investment in regular taxable investments (e.g., land) and increase future after-tax wealth for investors who do not qualify or dislike the restrictions of an IRA.

Given the relatively low past use of IRA's by farmers, a big shift in off-farm diversification is not likely, unless investor education and advertising change individual behavior. Furthermore, while farmers may have new financial incentives to diversify away from the farm, they also have strong incentives to continue to invest in certain farm assets because of capital gains treatment and estate-tax considerations.

James Monke (202) 694-5358
jmonke@econ.ag.gov **AO**

Your Internet Destination

. . . for information and analysis on the World Trade Organization

The WTO Briefing Room
On the Economic Research Service website

- ***Explore key issues*** for the next round of WTO negotiations on agriculture
- ***Learn more*** about WTO rules for agricultural trade, how the Agreement on Agriculture is being implemented, technical barriers facing U.S. Exports, and global environmental concerns affecting trade
- ***Survey*** current and future trends in global agriculture trade
- ***Use links*** to visit other WTO web sites

NEW

"Issues for Economic Research"—A New Reading Room

Topics include export subsidies, the impact of domestic support policies on ag production and trade, "green box" exemptions and the environment, and other unfinished business of the Uruguay Round

Features To Come

WTO implementation—Upcoming report in the International Agriculture & Trade report series

www.econ.ag.gov/briefing/wto/

Special Article

Uruguay Round Agreement on Agriculture: The Record to Date

During the 3 years since initial implementation of the Uruguay Round Agreement on Agriculture (URAA), the record is mixed. The Uruguay Round's overall impact on agricultural trade can be considered positive in moving toward several key goals, including reducing agricultural export subsidies, establishing new rules for agricultural import policy, and agreeing on disciplines for sanitary and phytosanitary trade measures. The URAA may also have contributed to a shift in domestic support of agriculture away from those practices with the largest potential to affect production, and therefore to affect trade flows. However, significant reductions in most agricultural tariffs will have to await a future round of negotiations.

The Uruguay Round of Multilateral Trade Negotiations, completed in 1994 with the signing of the Uruguay Round Agreements at Marrakesh, created the World Trade Organization (WTO) to replace the General Agreement on Tariffs and Trade (GATT) as an institutional framework for overseeing trade negotiations and adjudicating trade disputes. The Uruguay Round extended GATT/WTO rules of trade to new areas, such as intellectual property and services. Among the most significant accomplishments of the Uruguay Round was the creation of new disciplines on agricultural trade policy, to be implemented over the period 1995-2000 (1995-2004 for developing countries).

Until the Uruguay Round, agriculture had received special treatment under GATT trade rules through loopholes, exceptions, and exemptions from most of the disciplines that applied to manufactured goods. As a result, the GATT had allowed countries to use measures such as agricultural export subsidies, which were disallowed for other sectors, as well as a multitude of nontariff barriers that restricted trade in agricultural products.

Because of the predominance of nontariff barriers in agricultural trade, trade in agricultural products was largely unaffected by the previous rounds of cuts in tariffs on industrial products. Participants in the Uruguay Round continued the GATT's special treatment of agricultural trade by agreeing to separate disciplines on agriculture in the Agreement on Agriculture (URAA), but initiated a process aimed at reducing or limiting agriculture's exemptions and bringing it more fully under GATT disciplines.

Under the URAA, countries agreed to reduce agricultural support and protection substantially by establishing disciplines in the areas of market access barriers (trade restrictions facing imports), domestic support (subsidies and other programs that raise domestic agricultural prices and farm income), and export subsidies. These three sets of disciplines on agricultural policy are sometimes referred to as the "three legs of the stool" which, in an interdependent and mutually reinforcing way, support the liberalization of agricultural trade sought in the URAA.

Mary Anne Normile

In addition, the Agreement on the Application of Sanitary and Phytosanitary Measures (SPS Agreement) established rules to prevent countries from using arbitrary and scientifically unjustifiable health and environmental regulations as disguised barriers to trade in agricultural products. And a new process for settling disputes among WTO members, agreed to during the Uruguay Round, holds promise for improvements in the resolution of trade disputes involving agricultural products. The SPS Agreement and the new Dispute Settlement Understanding have brought formerly insoluble trade disputes under the WTO's umbrella and may generate unilateral reform, although problems with compliance may continue, as under previous agreements.

Despite the Uruguay Round's radical revision of the rules governing agricultural imports, the new rules have achieved only limited reduction in effective protection. The guidelines for establishing new tariffs, tariff reductions, and tariff-rate quotas were sufficiently general to allow members considerable latitude in their implementation, and many countries have manipulated details of the agreement to limit the implications of the new rules for their own agricultural sectors.

Market Access—Room To Maneuver

Under the market access disciplines of the URAA, all nontariff barriers (NTB's) were banned, including quantitative import restrictions, variable import levies, and all other border measures other than ordinary customs duties. NTB's were converted to ordinary tariffs (a process called "tariffication"), and all

preexisting and new tariffs were to be bound—i.e., set through a GATT/WTO negotiation, with the country subject to a penalty if raised—and subjected to a schedule of reductions. Tariffs created by conversion of NTB's were constructed based on the difference between internal market prices and world market prices for each product. This process resulted in very high tariffs, or "megatariffs," for some products.

To avoid any negative impact on trade related to tariffication, quotas were set to assure that historical trade (current access) levels were maintained, and minimum import opportunities (minimum access) were established where trade had been minimal. These current and minimum access levels were accomplished by instituting tariff-rate quotas (TRQ's). A TRQ applies a lower tariff to imports below a certain quantitative limit (quota), and permits a higher tariff rate on imported goods after the quota has been reached.

These new disciplines, however, provided for flexibility in implementation, and many countries have found ways to limit impacts on their own agricultural sectors. Latitude in selecting which domestic or world prices to use in constructing new equivalent tariffs from NTB's frequently led to tariffs set at levels that provided greater protection than had previously existed, including some at very high levels.

Guidelines for tariff cuts also provided considerable flexibility to minimize actual cuts in protection. Members agreed to reduce all preexisting and newly created tariffs by a simple average of 36 percent across all tariff lines, but no less than 15 percent for any tariff. By making large cuts in tariffs for commodities that do not compete with domestic production or large percentage cuts in already-low tariffs, the 36-percent average reduction could be achieved with minimal cuts in tariffs on products more sensitive to competition.

Some countries calculated the quota at a broad level of product aggregation, such as "meat" or "dairy products," and then allocated the total TRQ rather arbitrarily among the sub-products, minimizing trade in import-sensitive commodities. Still others delayed allocating the aggregate TRQ's to individual commodities until the implementation period, which left them the flexibility to set allocations based on market conditions.

In some cases, countries may have adopted within-quota tariffs too high to allow trade to reach the full quota amount. In other cases, countries used relatively large cuts in within-quota tariffs to meet the overall 36-percent reduction requirement. If an original within-quota tariff is already relatively low, allowing the full quota amount to be imported, then such a reduction of the within-quota tariff would not necessarily expand trade.

Distortions produced by disparities among tariffs, among commodities, among countries, and between primary and processed products have also caused concerns about URAA implementation. For example, tariffs for processed products are commonly higher than tariffs for primary products. Such "tariff escalation" can be a significant bias against trade in processed products.

URAA Calls for Reductions in Ag Sector Support And Protection

Commitments	Developed countries (1995-2000)	Developing countries (1995-2004)
	Percent	
Tariffs*		
Average cut for all agricultural products	36	24
Minimum cut per product (base period 1986-88)	15	10
Domestic support		
Total agricultural support cut (base period 1986-88)	20	13
Export subsidies		
Cut in value of subsidies	36	24
Cut in subsidized quantities (base period 1986-90)	21	14

Membership in the WTO requires that member countries annually provide information on their compliance with commitments, a process called "notification."
*Includes nontariff barriers converted to tariffs.
Source: World Trade Organization.

Economic Research Service, USDA

New Mix of Domestic Policies Reducing Potential Trade Effects

The Uruguay Round recognized that domestic agricultural programs contributed to a large share of the distortions in world agricultural markets. Domestic policies encouraged production beyond levels that would occur otherwise, resulting in displacement of lower cost imports. High support prices, set above world prices, led countries to dispose of excess production on the world market through use of export subsidies or dumping.

The URAA required countries to reduce outlays on programs and policies that provide direct economic incentives to producers to increase resource use or production, such as administered price supports, input subsidies, and producer payments that were not accompanied by limitations on production. Support reductions were implemented by agreed reductions to a country's Aggregate Measure of Support (AMS), a numerical measure that quantifies the economic benefits from those policies considered to have the greatest potential to affect production and trade (*AO* October 1997).

Under the domestic support provisions of the URAA, governments can continue assisting their agricultural sectors and rural economies through those programs presumed to have the smallest effects on production and trade—the "green box" policies. These include domestic food aid, certain types of income support, research, inspection, natural disaster relief, and other programs like crop insurance, environmental programs, and rural assistance. To be eligible for inclusion in the green box, policies must not act as an effective price support, must "have no, or at most minimal, trade-distorting effects or effects on production," and must meet other specific criteria that apply to individual programs.

In the original WTO agreement, 26 countries made commitments to reduce domestic support. As of May 1998, 24 countries had

Special Article

Reductions in Government Support of Agriculture Exceeded URAA Commitments in 1995

AMS* as percent of 1995 commitment levels	Reporting countries**
Percent	
0 - 19	Canada, Colombia, Czech Republic, Hungary, Mexico, Morocco, New Zealand, Poland
20 - 39	Australia, U.S.
40 - 59	Slovak Republic, Venezuela
60 - 79	Cyprus, European Union, Iceland, Japan, Norway, South Africa, Thailand
80 - 100	Brazil, Korea, Slovenia, Switzerland, Tunisia

* The AMS (Aggregate Measure of Support) is a numerical measure of the support provided to producers from both budgetary outlays and revenue transferred from consumers as a result of policies that affect market prices.
** As of June 1998, Costa Rica and Israel had not yet notified. Papua New Guinea and Bulgaria joined the WTO after the Agreement on Agriculture was signed and were not required to notify on their 1995 domestic supports.
Source: World Trade Organization.

Economic Research Service, USDA

notified the WTO of their compliance with these commitments. An analysis of these notifications shows that all countries reporting their 1995 support levels are meeting their commitments to reduce trade- and production-distorting subsidies from the 1986-88 base level agreed to in the URAA. Most countries reduced this support by more than the required amount.

Among the countries notifying the WTO about their 1995 domestic support, the value of support, as measured by the AMS, has decreased significantly. Total value of support from these policies in 1995 was $115 billion, about 60 percent of the level in the 1986-88 base period. However, countries could exempt production-limiting programs that base payments on fixed rather than actual production. Including these payments would show a smaller decline in domestic support.

How did compliance move so rapidly? Although some of the decline in the AMS has occurred simply because the domestic support levels in the 1986-88 base period were high, some has also been the result of policy changes undertaken by several countries since 1986-88. There is now less reliance on price support and more reliance on direct payments and green box policies. The European Union's (EU) reform of its Common Agricultural Policy (CAP) from 1992 to 1995, for example, reduced support prices and increased producer payments that are linked to production-limiting programs; Japan has reduced administered prices or held them constant since 1986-88; and the U.S. undertook important reforms under both the 1990 and 1996 Farm Acts that reduced the amount of direct payments included as part of the AMS and increased the amount of direct payments counted as part of the green box policies.

While support from policies believed to have the greatest effects on production and trade has declined in many countries, support from green box policies has increased by 54 percent from 1986-88 to 1995. Most of the $127 billion in expenditures on green box policies went for domestic food aid, infrastructure services, other general government service programs, and investment aids for disadvantaged producers. These expenditures can be considered to have a relatively small effect on agricultural production and trade.

Changes in the mix of domestic policies away from reliance on AMS policies and toward more green box policies might lead to expectations that related effects on production and trade may also have become smaller. However, in order to guarantee increased world market orientation, complementary reforms in trade policies must also take place. And the question of whether all programs reported in the green box have no significant production effects bears further investigation.

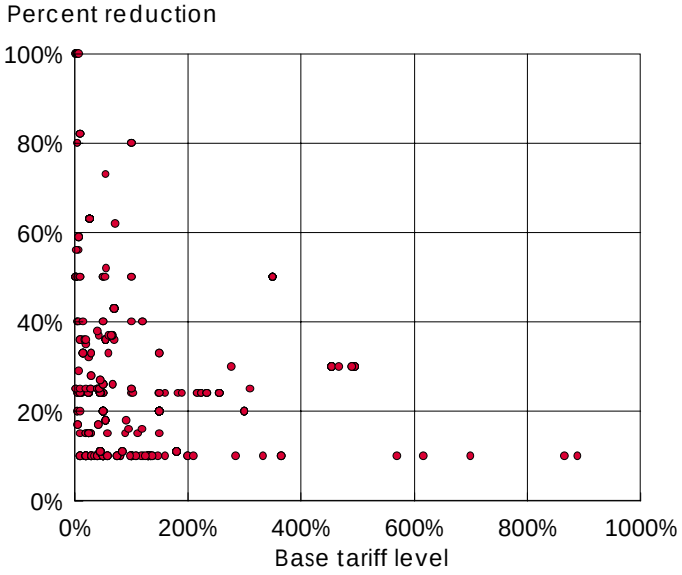
Meeting Commitments To Reduce Export Subsidies

Disciplining export subsidies, which are used by countries to bridge the gap between high domestic prices and lower world market prices, was one of the URAA's most significant accomplishments. Export subsidies distort agricultural trade by contributing to weakness in world market prices, by interfering with the advantage of low-cost producers competing in export markets, and by raising the market share of high-cost producers.

In the URAA, countries agreed to cuts in both the volume of subsidized exports and the expenditures on export subsidies. Of the 25 countries that have commitments to cut export subsidies, the EU by far employs the most. The EU accounted for nearly 84 percent of the $7.6 billion of export subsidies reported to the WTO for 1995 and roughly the same share of the $8.4 billion reported for 1996. The U.S. ranked ninth overall in export subsidy expenditures in 1995 and fourth in 1996, following the elimination of export subsidies by a number of other countries and higher U.S. dairy export subsidies.

Nearly all of the 25 WTO member countries with export subsidy commitments have submitted notifications for 1995 and 1996. High world grain prices kept most countries' use of export subsidies well below their WTO commitments in both years, in volume and in value. The EU even imposed taxes on grain exports.

Countries Agreed To Cut Lowest Tariffs More, Higher Tariffs Less



Grain tariffs for selected countries.
Source: World Trade Organization.
Economic Research Service, USDA

Among countries that exceeded their commitments in 1995, export subsidies generally were well within commitment levels in 1996. Two of the three countries exceeding volume commitments in 1996 claimed the right to carry over "unused" portions of their 1995 commitments to make up for the 1996 overrun. In response, other countries argued that flexibility provisions in the agreement were meant only to allow a country to pay back when it exceeded its limits, not as an opportunity to "bank" unused subsidies.

Despite the relatively satisfactory record of compliance with export subsidy commitments, the waivers and circumventions that may undermine the substantial export subsidy disciplines of the URAA are a concern to many WTO members. Hungary, for example, obtained a waiver from its export subsidy commitments, which it argues were miscalculated, and some members believe the EU and Canada instituted export marketing policies that allow them to circumvent their subsidy commitments. The EU, for example, claims the right to export processed cheese that would otherwise exceed WTO commitment levels by applying export subsidies available for component ingredients—skim milk powder and butterfat—that are well below WTO commitment levels.

Canada's two-tier price system for milk, established in 1995, prices milk cheaper when used in exported manufactured dairy products than when used domestically. Canada's milk pricing system has drawn complaints that it allows circumvention of export subsidy commitments because exports under this program have not been reported to the WTO. The U.S. and New Zealand are challenging Canada's policy through the WTO's dispute settlement mechanism.

So far, very few countries have changed their policies substantially to conform with their export commitments. The combination of strong grain markets in the years thus far reported, and the high base levels from which cuts were required, have permitted most countries to accommodate required reductions under their current policies. However, as export subsidy allowances decline in later years of the agreement and as market prices decline, some countries may have to adopt policy changes to comply.

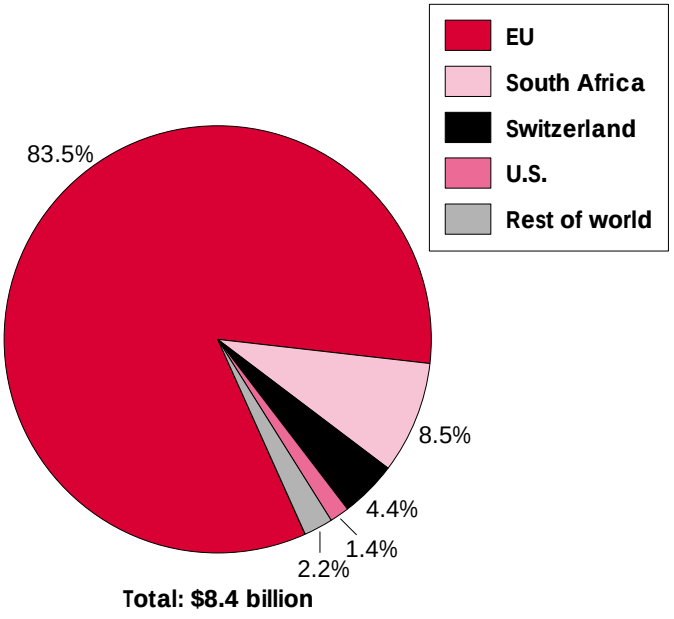
SPS Agreement— Protection from Risk, Not Obstruction of Trade

Some of the most important new disciplines affecting trade in primary and processed agricultural products are found in the WTO's SPS Agreement. Sanitary and phytosanitary measures regulating the movement of products across international borders are necessary to protect the public health and/or the environment from pests, diseases, and contaminants. However, these measures can also be used to obstruct trade opportunities created by other trade liberalization policies.

In the Uruguay Round, separate disciplines were negotiated for SPS measures for the first time. Prior to the Uruguay Round, disciplines on the use of SPS measures were ineffective—no SPS measure had been successfully challenged before a GATT dispute settlement panel, and several prominent disagreements over SPS measures in the 1980's remained unresolved.

The SPS Agreement recognizes the sovereign right of WTO members to adopt SPS measures to protect the life or health of humans, animals, or plants, but requires these measures to be based on a risk assessment. Measures based on international

European Union Accounted for Most Ag Export Subsidies in 1996



Source: World Trade Organization.
Economic Research Service, USDA

Special Article

New Dispute Settlement Process: Early Reviews Favorable

The Uruguay Round addressed a shortcoming of the GATT dispute settlement process that had presented serious problems for agricultural trade—the weakness of the process in enforcing existing rights and obligations. Under the old GATT system, any country could "block" the creation of a dispute resolution panel by refusing to agree on its formation. Similarly, even when a panel had been formed and the parties had litigated the dispute before the panel, a single country could "block" the adoption of the panel report. This gave the losing party the power to veto an adverse ruling.

Dispute panels were also not necessarily obliged to make a decision. They could simply hold that they did not know how to interpret a particular provision of the GATT or how to apply a particular provision in the circumstances presented. As a result, a panel could avoid holding whether the complainant was right or wrong. These and other weaknesses seriously undermined confidence in the dispute settlement system and therefore in the GATT agreements themselves.

The new WTO Understanding on the Rules and Procedures Governing the Settlement of Disputes (DSU) addressed these weaknesses. A single WTO member may no longer block the formation of a panel. The DSU now requires consensus to block panel formation, making dispute settlement effectively automatic upon the filing of the complaint, since there can be no consensus not to establish a panel without the complaining party. Similarly, a single party can no longer block panel reports. Adoption of a panel report is automatic within 60 days of the date of the circulation of the report unless a party has appealed. In cases of appeal, adoption of the appellate decision is automatic after completion of the appeal process. The DSU makes it clear that the function of panels is to decide, not to avoid, difficult issues presented in disputes.

The improved dispute settlement mechanism has enabled the WTO to adjudicate cases based on presumed violations of the SPS agreement, as well as other agricultural trade disputes. The EU Banana Import case—a challenge to the EU's system of import preferences given to former European colonies—has been fully adjudicated, although not yet implemented to the satisfaction of the U.S., and a panel has heard a challenge by Brazil to EU market access for poultry. A significantly greater number of agriculture-related disputes has been brought and adjudicated within the past 3 ½ years than during any comparable period in the past.

Furthermore, since the WTO Agreements came into force, there have been satisfactory settlements of several trade disputes without having to resort to the formal dispute settlement process—e.g., in disputes over Hungarian export subsidies, Philippine pork and poultry tariff-rate quota administration, and Korean shelf-life rules. Under the old GATT system, these types of agricultural disputes—involving export subsidies, market access, and SPS issues—often dragged on for years. Initial evidence indicates that the WTO dispute settlement system is a significant improvement over its GATT predecessor.

Kevin Brosch, Foreign Agricultural Service (202) 720-1667
broschk@fas.usda.gov

standards are presumed to be in compliance with the agreement. Countries may adopt stricter measures that provide a higher level of health or environmental protection than international standards, but scientific evidence must support the claim that the alternate measures actually do so. Countries must allow imports from countries with different SPS rules if the exporters demonstrate their measures are equivalent to those of the importers.

The SPS Agreement also includes a transparency provision that requires countries to notify WTO trading partners of changes in SPS measures that affect trade. SPS notification requirements have contributed to improved transparency and more reliable information on other countries' SPS measures among WTO member countries.

The SPS Committee, established by the SPS Agreement, has been used as a forum to air grievances over SPS measures. When bilateral exchanges through the SPS Committee fail to resolve differences, formal WTO consultations, which may lead to negotiated settlements, have in some instances obviated the need for referring the matter to a WTO dispute resolution panel, which ends in a judgment. An example in which formal consultations led to a negotiated settlement was the resolution of the U.S. dispute with South Korea over the latter's shelf-life requirements. Formal consultations may also successfully resolve the 1996 complaint by the U.S. against some of South Korea's numerous inspection measures that result in excessive port delays.

To date, three SPS disputes have advanced to WTO dispute settlement panels: the EU-U.S./Canada *Hormones* dispute over the safety of hormonal growth stimulants used in U.S. and Canadian beef cattle production, and the Australia-Canada *Salmon* and the Japan-U.S. *Varietals* disputes over measures applied by Australia and Japan to protect fish stocks and orchards, respectively, from exotic pathogens. In all three disputes, WTO panels found the SPS measures in question were inconsistent with these countries' obligations under the SPS Agreement.

The SPS Agreement legitimizes SPS complaints, which could not even be registered under previous trade agreements, and the increasing number of formal complaints in the first 2 years since the agreement took effect suggests that the prospects for disciplining the use of SPS measures impeding agricultural trade may have improved since the Uruguay Round. But beyond the high-profile WTO disputes, the past 2 years have seen a number of unilateral and negotiated decisions to ease SPS trade restrictions. As WTO members review SPS regulations to determine whether they and their trading partners are in compliance, regulatory authorities in several instances are either unilaterally modifying

regulations to comply with the SPS Agreement or voluntarily modifying regulations after bilateral exchanges.

The SPS Agreement may be credited with being an important contributing factor in inducing some countries to revise especially conservative measures. Regulatory changes resulting from the SPS Agreement include U.S. actions allowing imports of uncooked beef from disease-free regions of Argentina and the replacement of the ban on Mexican avocados with a limited import program. Similar examples include the lifting of a 46-year-old ban on U.S. tomatoes by Japan, acceptance of Canadian salmon by New Zealand, and Australia's acceptance of cooked poultry meat.

New Round To Target Further Reform

As part of the URAA, member countries agreed to begin negotiations for a continuation of the agricultural reform process in 1999, one year before the end of the URAA implementation period (1995-2000). The world agricultural trading system is now well positioned for further trade liberalization, having undergone the process of revising the rules that apply to agricultural trade, bringing new disciplines to bear on the use of trade-distorting domestic policies, cutting export subsidies, disciplining the use of SPS measures, and putting in place a dispute settlement mechanism better equipped to bring difficult trade disputes to resolution.

Tightening countries' leeway in implementing the rules adopted in the Uruguay Round could be a fruitful area for further negotiations. The challenge for the next round will be to extend the progress made in the Uruguay Round toward bringing agriculture more fully under the WTO disciplines that have applied to goods in other sectors..

Mary Anne Normile, (202) 694-5162
mnormile@econ.ag.gov
Contributors:
Fred Nelson, Ed Young, Susan Leetmaa, Karen Ackerman, Donna Roberts, John Wainio, Gene Hasha, and David Skully, Economic Research Service
Kevin Brosch, Foreign Agricultural Service **AO**

Statistical Indicators

Summary Data

Table 1—Key Statistical Indicators of the Food & Fiber Sector

				1997	1998				1999	
	1997	1998 F	1999 F	IV	I	II	III	IV	I	II
Prices received by farmers (1990-92=100)	107	--	--	106	102	103	--	--	--	--
Livestock & products	98	--	--	97	94	96	--	--	--	--
Crops	115	--	--	113	110	112	--	--	--	--
Prices paid by farmers (1990-92=100)							--	--	--	--
Production items	117	--	--	116	115	114	--	--	--	--
Commodities and services, interest,	117	--	--	117	117	116	--	--	--	--
taxes, and wages							--	--	--	--
Cash receipts ($ bil.)[1]	209	198	--	64	49	43	48	58	--	--
Livestock	97	93	--	25	23	23	24	24	--	--
Crops	112	105	--	39	26	21	24	34	--	--
Market basket (1982-84=100)										
Retail cost	160	--	--	161	162	162	163	--	--	--
Farm value	106	--	--	105	102	104	103	--	--	--
Spread	189	--	--	191	194	194	195	--	--	--
Farm value/retail cost (%)	23	--	--	23	23	22	22	--	--	--
Retail Prices (1982-84=100)										
All food	157	161	163	159	160	160	161	161	163	163
At home	158	161	163	159	160	160	161	161	163	163
Away from home	157	161	165	159	160	161	162	163	164	165
Agricultural exports ($ bil.)[2]	57.4	54.5	52.0	13.2	12.9	16.3	14.3	11.8	14.3	13.7
Agricultural imports ($ bil.)[2]	35.8	38.0	39.5	9.3	8.7	9.2	9.8	9.7	10.4	9.7
Commercial production										
Red meat (mil. lb.)	43,209	44,929	43,815	11,167	11,038	11,015	11,380	11,496	10,846	10,788
Poultry (mil. lb.)	33,258	33,527	34,995	8,383	8,258	8,453	8,366	8,450	8,410	8,870
Eggs (mil. doz.)	6,460	6,635	6,790	1,667	1,637	1,635	1,653	1,710	1,665	1,675
Milk (bil. lb.)	156.6	157.4	160.1	38.2	39.2	40.9	38.7	38.5	39.8	41.5
Consumption, per capita										
Red meat and poultry (lb.)	208.6	214.0	214.0	53.9	51.7	52.3	54.0	56.0	52.1	53.0
Corn beginning stocks (mil. bu.)[3]	425.9	883.2	1,433.7	2,496.6	883.2	7,246.8	4,939.9	3,039.1	--	--
Corn use (mil. bu.)[3]	8,849.5	8,825.0	--	1,617.1	3,004.2	2,307.8	1,904.4	--	--	--
Prices[4]										
Choice steers--Neb. Direct ($/cwt)	66.32	62.47	70-75	66.61	61.73	64.16	58.97	64-66	69-73	72-78
Barrows and gilts--IA, So. MN ($/cwt)	51.36	32.87	33-35	43.53	34.74	39.42	33.30	23-25	32-34	35-37
Broilers--12-city (cents/lb.)	58.80	62.70	56-60	54.00	56.40	61.00	70.40	62-64	56-60	57-61
Eggs--NY gr. A large (cents/doz.)	81.20	76.10	70-75	88.20	79.00	66.50	76.00	82-84	73-77	62-68
Milk--all at plant $/cwt)	13.34	15.25-	13.70-	14.53	14.60	13.73	15.37	17.35-	15.30-	12.90-
		15.35	14.60					17.65	15.90	13.80
Wheat--KC HRW ordinary ($/bu.)	4.16	--	--	3.82	3.62	3.32	--	--	--	--
Corn--Chicago ($/bu.)	2.78	--	--	2.74	2.72	2.49	--	--	--	--
Soybeans--Chicago ($/bu.)	7.63	--	--	6.95	6.68	6.95	--	--	--	--
Cotton--avg. spot 41-34 (cents/lb)	69.89	--	--	67.64	64.48	66.86	--	--	--	--
	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
Farm real estate values[5]										
Nominal ($ per acre)	668	683	703	713	736	782	832	890	945	1,000
Real (1982 $)	539	528	521	507	511	529	550	574	598	620

F = Forecast. -- = Not available. 1. Quarterly data seasonally adjusted at annual rates. 2. Annual data based on Oct.-Sept. fiscal years ending with year indicated. 3. Sept.-Nov. first quarter; Dec.-Feb. second quarter; Mar.-May third quarter; Jun.-Aug. fourth quarter; Sept.-Aug. annual. Use includes exports and domestic disappearance. 4. Simple averages, Jan.-Dec. 5. 1990-98 values as of January 1. 1989 values as of February 1.

U.S. & Foreign Economic Data

Table 2—U.S. Gross Domestic Product & Related Data

				1996	1997				1998	
	1995	1996	1997	IV	I	II	III	IV	I	II
	Billions of current dollars (quarterly data seasonally adjusted at annual rates)									
Gross Domestic Product	7,265.4	7,636.0	8,110.9	7,792.9	7,933.6	8,063.4	8,170.8	8,254.5	8,384.2	8,440.6
Gross National Product	7,287.1	7,674.0	8,102.9	7,829.0	7,952.4	8,062.3	8,162.0	8,234.9	8,369.4	8,421.8
Personal consumption expenditures	4,957.7	5,207.6	5,493.7	5,308.1	5,405.7	5,438.8	5,540.3	5,593.2	5,676.5	5,773.7
Durable goods	608.5	634.5	673.0	638.2	658.4	659.9	681.2	682.2	705.1	720.1
Nondurable goods	1,475.8	1,534.7	1,600.6	1,560.1	1,587.4	1,588.2	1,611.3	1,613.2	1,633.1	1,655.2
Food	735.1	756.1	780.9	766.6	775.5	775.8	785.3	787.1	796.9	810.2
Clothing and shoes	254.7	264.3	278.0	266.2	275.2	275.6	280.9	280.7	291.0	295.3
Services	2,873.4	3,038.4	3,220.1	3,109.8	3,159.9	3,190.7	3,247.9	3,297.8	3,338.2	3,398.4
Gross private domestic investment	1,038.2	1,116.5	1,256.0	1,151.1	1,193.6	1,259.9	1,265.7	1,292.0	1,366.6	1,345.0
Fixed investment	1,008.1	1,090.7	1,188.6	1,119.2	1,127.5	1,176.4	1,211.1	1,220.1	1,271.1	1,305.8
Change in business inventories	30.1	25.9	67.4	31.9	66.1	83.5	54.6	71.9	95.5	39.2
Net exports of goods and services	-86.0	-94.8	-93.4	-88.6	-98.8	-86.8	-94.7	-98.8	-123.7	-159.3
Government consumption expenditures and gross investment	1,355.5	1,406.7	1,454.6	1,422.3	1,433.1	1,451.5	1,459.5	1,468.1	1,464.9	1,481.2
	Billions of 1992 dollars (quarterly data seasonally adjusted at annual rates) [1]									
Gross Domestic Product	6,742.1	6,928.4	7,269.8	7,017.4	7,101.6	7,236.5	7,311.2	7,364.6	7,464.7	7,498.6
Gross National Product	6,779.5	7,008.4	7,266.2	7,105.3	7,167.8	7,239.3	7,307.0	7,350.7	7,455.2	7,485.9
Personal consumption expenditures	4,595.3	4,714.1	4,913.5	4,756.4	4,818.1	4,872.7	4,947.0	4,981.0	5,055.1	5,130.2
Durable goods	583.6	611.1	668.6	617.1	637.8	653.8	679.6	684.8	710.3	729.4
Nondurable goods	1,412.6	1,432.3	1,486.3	1,441.2	1,457.8	1,477.1	1,495.7	1,494.3	1,521.2	1,540.9
Food	690.5	689.7	699.3	689.0	694.6	697.3	700.6	699.9	706.8	716.3
Clothing and shoes	257.5	267.7	288.4	270.0	277.1	283.3	291.9	292.3	307.4	311.4
Services	2,599.6	2,671.0	2,761.5	2,698.2	2,723.9	2,743.6	2,775.4	2,804.8	2,829.3	2,866.8
Gross private domestic investment	991.5	1,069.1	1,206.4	1,104.8	1,149.2	1,211.3	1,215.8	1,241.9	1,321.8	1,306.5
Fixed investment	962.1	1,041.7	1,138.0	1,068.7	1,079.0	1,127.0	1,159.3	1,169.5	1,224.9	1,264.1
Change in business inventories	27.3	25.0	63.2	32.9	63.7	79.0	51.0	66.5	91.4	38.2
Net exports of goods and services	-98.8	-114.4	-136.1	-105.6	-126.3	-131.6	-142.4	-149.0	-198.5	-245.2
Government consumption expenditures and gross investment	1,251.9	1,257.9	1,285.0	1,261.8	1,260.5	1,284.4	1,288.9	1,289.2	1,283.0	1,294.8
GDP implicit price deflator (% change)	2.3	1.9	1.9	1.8	2.8	1.6	1.2	1.2	0.8	0.9
Disposable personal income ($ bil.)	5,277.0	5,534.7	5,795.1	5,630.1	5,711.2	5,767.9	5,821.8	5,879.4	5,937.1	5,988.9
Disposable per. income (1992 $ bil.)	4,906.0	5,043.0	5,183.1	5,089.0	5,130.8	5,167.5	5,198.4	5,235.8	5,287.1	5,321.5
Per capita disposable pers. income ($)	20,050	20,840	21,633	21,127	21,391	21,558	21,709	21,871	22,046	22,192
Per capita disp. pers. income (1992 $)	18,640	18,989	19,349	19,096	19,217	19,315	19,385	19,478	19,632	19,719
U.S. resident population plus Armed Forces overseas (mil.)[2]	263.0	265.5	267.9	266.4	266.9	267.5	268.1	268.9	269.3	269.9
Civilian population (mil.)[2]	261.4	263.9	266.4	264.9	265.4	266.0	266.6	267.3	267.8	268.4
		Annual		1997			1998			
	1995	1996	1997	Aug	Mar	Apr	May	Jun	Jul	Aug
	Monthly data seasonally adjusted									
Total industrial production (1992=100)	116.0	120.2	127.0	127.9	130.8	131.6	131.7	129.9	129.5	132.0
Leading economic indicators (1992=100)	100.8	102.0	103.8	104.0	105.2	105.3	105.2	105.0	105.5	105.5
Civilian employment (mil. persons)[3]	124.9	126.7	129.6	129.7	131.0	131.4	131.5	131.2	131.1	131.2
Civilian unemployment rate (%)[3]	5.6	5.4	4.9	4.9	4.7	4.3	4.3	4.5	4.5	4.5
Personal income ($ bil. annual rate)	6,072.1	6,425.2	6,784.0	6,826.7	7,033.9	7,055.3	7,085.9	7,104.4	7,134.2	7,172.1
Money stock-M2 (daily avg.) ($ bil.)[4]	3,651.2	3,826.1	4,045.8	3,957.4	4,133.9	4,167.2	4,177.6	4,196.1	4,212.7	4,242.1
Three-month Treasury bill rate (%)	5.51	5.02	5.07	5.13	5.03	5.00	5.03	4.99	4.96	4.94
AAA corporate bond yield (Moodyís) (%)	7.59	7.37	7.27	7.22	6.72	6.69	6.69	6.53	6.55	6.52
Total housing starts (1,000)[5]	1,354.1	1,476.8	1,474.0	1,383	1,585	1,546	1,538	1,620	1,706	1,613
Business inventory/sales ratio[6]	1.43	1.40	1.38	1.38	1.38	1.39	1.39	1.38	1.38	--
Sales of all retail stores ($ bil.)[7]	2,346.3	2,465.1	2,546.3	216.4	221.1	222.7	225.5	225.6	224.2	224.2
Nondurable goods stores ($ bil.)	1,405.6	1,457.8	1,505.4	126.8	128.5	129.3	130.4	130.3	131.0	131.0
Food stores ($bil.)	408.4	424.2	432.1	35.9	36.4	36.6	36.8	36.9	37.0	37.3
Apparel and accessory stores ($ bil.)	109.5	113.0	116.8	10.1	10.4	10.5	10.4	10.3	10.5	10.5
Eating and drinking places ($ bil.)	239.9	238.4	244.1	19.8	20.3	20.3	20.5	20.5	20.4	20.4

-- = Not available. 1. In April 1996, 1992 dollars replaced 1987 dollars. 2. Population estimates based on 1990 census. 3. Data beginning January 1994 not directly comparable with data for earlier periods because of a major redesign of household survey questionnaire. 4. Annual data as of December of year listed. 5. Private, including farm. 6. Manufacturing and trade. 7. Annual total. *Information contact: David Johnson (202) 694-5324*

Table 3—World Economic Growth

	Calendar year									
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
	Real GDP, annual percent change									
World	2.6	1.9	1.9	1.6	3.2	2.8	3.4	3.4	1.9	1.7
less U.S.	3.1	3.0	1.6	1.3	3.0	2.9	3.4	3.2	1.3	1.7
Developed Economies	2.7	1.8	1.6	0.8	2.8	2.2	2.8	2.8	2.0	1.6
less U.S.	3.5	3.2	1.0	0.0	2.4	2.1	2.5	2.2	1.1	1.5
United States	1.2	-0.9	2.7	2.3	3.5	2.3	3.4	3.9	3.5	1.7
Canada	0.2	-1.9	0.9	2.5	3.9	2.2	1.2	3.7	2.8	2.5
Japan	5.1	3.8	1.0	0.3	0.7	1.4	4.1	0.8	-2.8	-0.3
Australia	1.5	-0.7	2.4	3.9	5.5	3.5	3.7	3.3	3.5	2.8
European Union	3.1	3.7	1.0	-0.6	3.0	2.4	1.8	2.7	2.9	2.3
Transition Economies	-4.2	-6.9	-11.2	-6.5	-8.8	-1.5	-2.2	1.0	-2.4	-7.7
Eastern Europe	-6.3	-10.6	-4.0	0.8	3.5	5.5	3.1	1.7	2.2	1.7
Poland	-10.8	-6.3	2.0	3.8	4.2	7.1	5.9	7.0	5.9	3.9
Former Soviet Union	-3.5	-5.5	-13.7	-9.3	-13.9	-5.1	-5.1	0.5	-5.3	-14.0
Russia	-3.0	-5.0	-14.5	-8.7	-12.6	-4.1	-4.9	0.8	-5.8	-15.0
Developing Economies	3.8	4.8	6.3	6.2	6.7	5.7	6.4	5.7	2.1	3.1
Asia	5.8	6.6	8.9	8.7	9.4	8.6	8.0	6.7	2.0	3.9
East Asia	5.1	8.7	10.8	10.6	10.7	9.3	8.4	7.8	4.2	5.9
China	3.8	9.3	14.2	13.5	12.6	10.5	9.6	8.8	7.2	7.3
Taiwan	5.4	7.5	6.8	6.3	6.5	6.0	5.7	6.8	5.0	4.4
Korea	9.5	9.2	5.1	5.8	8.8	8.7	7.1	5.5	-5.7	2.2
Southeast Asia	8.2	6.8	6.9	7.4	8.1	8.5	7.5	4.8	-6.8	-2.4
Indonesia	8.9	8.9	7.2	7.2	7.5	8.2	8.0	4.7	-14.7	-6.9
Malaysia	9.7	8.8	7.8	8.4	9.4	9.5	8.0	7.8	-6.0	-0.9
Philippines	2.7	-0.2	0.3	2.1	4.4	4.8	5.7	5.1	-2.2	-3.4
Thailand	11.7	8.0	8.1	8.3	8.8	9.2	6.4	-0.4	-8.0	-1.7
South Asia	5.6	1.2	5.6	4.6	7.0	6.9	7.1	5.3	3.7	3.1
India	5.6	0.5	5.4	4.9	7.5	7.3	7.5	5.5	4.0	3.5
Pakistan	4.5	5.5	7.8	1.9	3.9	5.1	4.6	3.0	2.0	1.0
Latin America	-0.1	3.7	2.9	3.9	5.2	0.2	3.7	4.9	2.2	1.1
Mexico	5.1	4.2	3.6	2.0	4.5	-6.3	5.2	7.0	4.0	3.3
Caribbean/Central	0.7	4.0	8.0	4.9	4.4	2.9	8.1	2.9	4.0	3.6
South America	-1.4	3.5	2.6	4.5	5.4	1.9	3.1	4.5	1.7	0.4
Argentina	0.2	8.9	8.6	6.0	7.4	-4.6	4.4	8.2	4.9	2.6
Brazil	-4.6	0.5	-1.2	4.5	5.8	3.0	2.9	2.9	0.6	-1.5
Colombia	4.1	1.8	4.2	5.2	5.8	5.3	2.4	3.0	2.3	1.6
Venezuela	6.5	9.7	6.1	0.3	-2.9	3.4	-0.4	5.1	-3.0	0.0
Middle East	5.0	2.9	5.5	3.5	0.3	3.5	4.3	4.1	1.2	1.8
Israel	6.8	7.7	5.6	5.6	6.9	7.0	4.6	2.3	1.5	1.8
Saudi Arabia	8.7	8.4	2.8	-0.6	0.5	0.5	1.4	1.9	-1.0	0.5
Turkey	9.3	0.9	6.0	8.0	-5.5	7.0	7.0	7.6	3.8	3.5
Africa	1.6	0.7	1.2	1.3	2.7	2.8	5.0	2.8	3.5	3.4
North Africa	2.2	1.0	2.2	0.1	2.8	2.4	5.6	2.4	4.9	4.3
Egypt	5.6	1.1	4.4	2.9	3.9	4.6	5.0	5.0	5.0	4.7
Sub-Sahara	1.1	0.5	0.3	2.5	2.6	3.2	4.5	3.1	2.2	2.5
South Africa	-0.5	-1.0	-2.6	1.5	2.8	3.1	3.3	1.7	0.8	2.2
	Consumer prices, percent change									
Developed Economies	5.2	4.6	3.5	3.0	2.6	2.5	2.4	2.1	2.1	2.0
Transition Economies	38.6	95.8	656.6	609.3	268.4	124.1	41.4	27.8	13.8	8.7
Developing Economies	68.1	36.2	38.3	46.8	50.7	21.7	13.7	8.5	10.2	8.5
Asia	6.5	7.8	6.8	10.3	14.7	11.9	6.7	3.9	8.0	6.2
Latin America	438.3	129.1	151.4	208.8	210.2	35.9	22.3	13.1	9.1	7.4
Middle East	22.4	27.5	25.6	24.6	31.9	35.9	24.5	22.6	26.6	26.3
Africa	17.5	24.3	32.1	31.2	34.6	33.9	26.2	10.5	7.5	6.0

The last three years are either estimates or forecasts. Sources: Oxford Economic Forecasting; International Financial Statistics, IMF.

Information contact: Andy Jerardo (202) 694-5323

Farm Prices

Table 4—Indexes of Prices Received & Paid by Farmers, U.S. Average

	Annual			1997	1998					
	1995	1996	1997	Oct	May	Jun	Jul	Aug	Sep	Oct
					1990-92=100					
Prices received										
All farm products	102	112	107	107	103	102	102	101	99	99
All crops	112	126	115	114	113	107	107	104	101	101
Food grains	134	157	128	124	109	96	89	85	88	98
Feed grains and hay	112	146	117	112	108	105	101	91	86	86
Cotton	127	122	112	115	105	113	110	109	111	114
Tobacco	103	105	104	103	--	--	94	93	103	107
Oil-bearing crops	104	128	130	111	112	111	111	98	93	93
Fruit and nuts, all	100	118	109	120	110	124	131	142	131	127
Commercial vegetables	120	109	120	146	128	108	122	111	112	140
Potatoes and dry beans	107	114	93	85	112	105	104	93	89	83
Livestock and products	92	99	99	97	95	98	96	98	97	98
Meat animals	85	87	92	89	87	86	79	78	73	75
Dairy products	98	114	102	108	101	107	108	118	127	132
Poultry and eggs	107	120	114	108	107	115	121	132	128	127
Prices paid										
Commodities and services, interest, taxes, and wage rates	110	115	116	117	116	115	115	114	113	113
Production items	109	115	116	116	114	113	112	111	110	110
Feed	104	130	122	119	108	105	106	101	96	92
Livestock and poultry	82	75	93	95	91	88	83	83	80	85
Seeds	110	115	119	120	123	123	123	123	123	123
Fertilizer	120	124	121	118	115	115	114	112	111	109
Agricultural chemicals	115	119	121	121	121	122	122	122	122	122
Fuels	94	105	103	112	94	88	85	83	86	89
Supplies and repairs	112	115	117	118	119	118	119	119	119	119
Autos and trucks	107	108	109	119	118	118	118	118	118	118
Farm machinery	120	125	128	131	132	132	132	132	132	132
Building material	114	115	118	118	118	118	118	119	118	118
Farm services	118	118	118	116	116	117	118	117	117	117
Rent	116	119	119	121	124	124	124	124	124	124
Int. payable per acre on farm real estate debt	101	105	106	107	108	108	108	108	108	108
Taxes payable per acre on farm real estate	109	112	115	115	119	119	119	119	119	119
Wage rates (seasonally adjusted)	114	117	123	126	130	130	125	125	125	125
Production items, interest, taxes, and wage rates	109	114	116	117	115	114	113	113	111	111
Ratio, prices received to prices paid (%)*	93	98	92	91	89	89	89	89	88	88
Prices received (1910-14=100)	647	712	679	680	656	650	645	643	630	631
Prices paid, etc. (parity index) (1910-14=100)	1,437	1,504	1,527	1,560	1,522	1,536	1,528	1,519	1,507	1,507
Parity ratio (1910-14=100) (%)*	45	47	45	44	43	43	42	42	42	42

-- = Not available. Values for two most recent months are revised or preliminary. *Ratio of index of prices received for all farm products to index of prices paid for commodities and services, interest, taxes, and wage rates. Ratio uses the most recent prices paid index. Data for this table is taken from the publication *Agricultural Prices*, which is produced monthly by USDAís National Agricultural Statistics Service (NASS) and is available at http://jan.mannlib.cornell.edu/reports/nassr/price/pap-bb. For historical data or for categories not listed here, call the National Agricultural Statistics Service (NASS) Information Hotline at 1-800-727-9540, or access the NASS Home Page at http://www2.hqnet.usda.gov/nass.

Table 5—Prices Received by Farmers, U.S. Average

	Annual[1]			1997	1998					
	1995	1996	1997	Oct	May	Jun	Jul	Aug	Sep	Oct
Crops										
All wheat ($/bu.)	4.55	4.30	3.45	3.58	3.06	2.77	2.56	2.39	2.41	2.72
Rice, rough ($/cwt)	9.15	9.96	9.64	10.00	9.41	9.51	9.57	8.95	9.35	9.26
Corn ($/bu.)	3.24	2.71	2.60	2.54	2.34	2.28	2.20	1.90	1.83	1.91
Sorghum ($/cwt)	5.69	4.17	4.00	4.06	3.71	3.96	3.80	3.32	2.91	3.09
All hay, baled ($/ton)	82.20	95.80	102.50	100.00	103.00	91.80	88.60	88.50	86.50	85.20
Soybeans ($/bu.)	6.72	7.35	6.50	6.50	6.26	6.15	6.13	5.43	5.25	5.18
Cotton, upland (¢/lb.)	75.40	69.30	66.90	69.40	63.50	68.50	66.50	66.20	67.10	68.90
Potatoes ($/cwt)	6.77	4.93	5.68	4.93	6.52	6.04	5.93	5.30	4.92	4.60
Lettuce ($/cwt)[2]	23.50	14.70	17.30	34.80	14.70	11.40	15.40	16.20	14.00	24.30
Tomatoes fresh ($/cwt)[2]	25.80	28.00	33.00	27.40	34.70	27.00	40.80	20.40	27.20	44.90
Onions ($/cwt)	11.10	10.60	12.60	9.20	18.50	15.90	21.30	15.10	12.90	12.70
Beans, dry edible ($/cwt)	20.80	23.50	17.70	16.90	21.10	21.30	21.40	19.80	19.30	19.00
Apples for fresh use (¢/lb.)	24.00	20.80	22.20	25.30	18.20	16.30	16.10	19.00	22.70	22.80
Pears for fresh use ($/ton)	272.00	376.00	276.00	361.00	373.00	353.00	405.00	457.00	420.00	479.00
Oranges, all uses ($/box)[3]	4.23	5.01	4.57	3.90	5.68	6.41	5.85	5.37	4.97	5.42
Grapefruit, all uses ($/box)[3]	2.30	2.43	1.74	3.23	0.42	3.58	3.66	6.01	11.09	3.88
Livestock										
Cattle, all beef ($/cwt)	61.80	58.70	63.10	63.30	63.00	61.80	58.40	57.40	56.10	57.90
Calves ($/cwt)	73.10	58.40	78.90	84.30	88.90	81.70	76.60	76.90	74.10	74.70
Hogs, all ($/cwt)	40.50	51.90	52.90	47.30	42.20	42.20	36.70	35.10	29.50	28.50
Lambs ($/cwt)	78.20	88.20	90.30	87.20	63.30	88.70	81.00	79.90	71.40	--
All milk, sold to plants ($/cwt)	12.78	14.75	13.36	14.10	13.20	14.00	14.10	15.40	16.60	17.30
Milk, manuf. grade ($/cwt)	11.79	13.43	12.17	13.20	11.30	13.00	14.00	14.60	15.40	16.20
Broilers, live (¢/lb.)	34.40	38.10	37.70	34.70	36.90	40.30	43.20	46.90	45.90	43.90
Eggs, all (¢/doz.)[4]	62.40	74.90	70.20	65.90	54.80	60.00	58.30	64.90	63.40	66.40
Turkeys (¢/lb.)	41.00	43.30	39.90	41.00	35.40	35.90	37.50	38.80	40.20	42.80

-- = Not available. Values for last two months revised or preliminary. 1. Season-average price by crop year for crops. Calendar year average of monthly prices for livestock. 2. Excludes Hawaii. 3. Equivalent on-tree returns. 4. Average of all eggs sold by producers including hatching eggs and eggs sold at retail. Data for this table is taken from the publication *Agricultural Prices,* which is produced monthly by USDA's National Agricultural Statistics Service (NASS) and is available at http://jan.mannlib.cornell.edu/reports/nassr/price/pap-bb. For historical data or for categories not listed here, call the National Agricultural Statistics Service (NASS) Information Hotline at 1-800-727-9540, or access the NASS Home Page at http://www2.hqnet.usda.gov/nass.

Producer & Consumer Prices

Table 6—Consumer Price Indexes for All Urban Consumers, U.S. Average (not seasonally adjusted)

	Annual			1997	1998					
	1995	1996	1997	Oct	May	Jun	Jul	Aug	Sep	Oct
					1982-84=100					
Consumer Price Index, all items	152.4	156.9	160.5	161.6	162.8	163.0	163.2	163.4	163.6	164.0
CPI, all items less food	153.1	157.5	161.1	162.2	163.3	165.3	163.6	163.9	164.1	164.4
All food	148.4	153.3	157.3	158.2	160.3	160.1	160.5	161.0	161.1	162.0
Food away from home	149.0	152.7	157.0	158.2	160.6	160.7	161.1	161.5	162.1	162.3
Food at home	148.8	154.3	158.1	159.0	160.7	160.5	160.8	161.4	161.2	162.5
Meats[1]	135.5	140.2	144.4	145.2	141.0	141.5	141.8	142.2	141.6	141.3
Beef and veal	134.9	134.5	136.8	137.1	136.3	136.3	136.1	137.0	136.3	136.1
Pork	134.8	148.2	155.9	157.4	147.6	148.7	149.7	149.9	148.7	147.5
Poultry	143.5	152.4	156.6	155.6	155.6	155.5	156.6	158.9	159.3	161.1
Fish and seafood	171.6	173.1	177.1	178.4	180.9	180.5	181.4	183.5	181.5	183.1
Eggs	120.5	142.1	140.0	135.9	128.6	126.3	127.5	135.4	132.4	136.1
Dairy products[2]	132.8	142.1	145.5	145.7	148.1	148.1	148.2	150.5	152.9	155.0
Fats and oils[3]	137.3	140.5	141.7	141.7	141.2	143.3	147.6	149.7	152.4	156.8
Fresh fruits	219.0	234.4	236.3	242.6	249.0	247.3	247.4	248.7	247.6	251.8
Processed fruits	137.1	145.2	148.8	148.4	--	--	--	--	--	--
Fresh vegetables	193.1	189.2	194.6	192.8	229.7	214.7	214.0	205.6	200.1	213.9
Potatoes	174.7	180.6	174.2	181.6	187.7	193.1	196.5	192.7	189.1	187.0
Processed vegetables	138.3	143.9	147.2	145.9	--	--	--	--	--	--
Cereals and bakery products	167.5	174.0	177.6	178.4	180.5	181.6	181.8	182.7	181.9	182.2
Sugar and sweets	137.5	143.7	147.8	148.2	149.5	150.5	149.9	150.2	150.8	150.5
Nonalcoholic beverages[4]	131.7	128.6	133.4	136.6	132.9	132.8	132.3	132.0	132.2	132.6
Apparel										
Apparel, commodities less footwear	129.3	128.5	129.4	131.4	--	--	--	--	--	--
Footwear	125.4	126.6	127.6	130.6	128.3	128.2	127.0	127.7	128.6	130.3
Tobacco and smoking products	225.7	232.8	243.7	250.2	270.0	266.9	273.2	273.7	283.5	284.9
Alcoholic beverages	153.9	158.5	162.8	163.7	165.2	165.5	165.6	165.7	166.3	166.6

-- = Not available. 1. Beef, veal, lamb, pork, and processed meat. 2. Includes butter. 3. Includes butter as of Jan í98. 4. Includes fruit juices as of Jan. í98.

This table is compiled with data provided by the Bureau of Labor Statistics (BLS). BLS operates a website at http://stats.bls.gov/blshome.html and a Consumer Prices Information Hotline at (202) 606-7828.

Table 7—Producer Price Indexes, U.S. Average (not seasonally adjusted)

	Annual			1997	1998					
	1995	1996	1997	Oct	May	Jun	Jul	Aug	Sep	Oct
					1982=100					
All commodities	124.8	127.7	127.6	127.8	125.1	124.8	124.8	124.2	123.9	124.0
Finished goods[1]	127.9	131.3	131.8	132.3	130.6	130.7	130.9	130.6	130.6	131.4
All foods[2]	126.7	132.5	132.8	133.5	130.0	131.9	132.5	132.8	133.5	133.7
Consumer foods	129.0	133.6	134.5	135.1	133.6	133.8	134.6	135.0	135.4	135.5
Fresh fruits and melons	85.7	100.8	99.4	97.7	92.3	91.1	88.7	90.2	90.9	91.7
Fresh and dry vegetables	144.4	135.0	123.1	148.8	134.2	120.9	146.6	116.4	130.8	148.4
Dried and dehydrated fruits	121.2	124.2	124.9	125.7	127.4	127.0	127.4	125.6	125.6	124.3
Canned fruits and juices	129.4	137.5	137.6	135.8	134.1	133.8	134.6	134.4	134.2	132.8
Frozen fruits, juices and ades	115.9	123.9	117.2	114.2	115.3	115.4	117.5	116.3	116.5	117.2
Fresh veg. except potatoes	139.8	120.9	121.3	143.1	123.2	106.5	153.7	114.9	135.0	161.9
Canned vegetables and juices	116.6	121.2	120.1	120.2	121.9	121.9	122.2	123.1	122.6	120.2
Frozen vegetables	124.2	125.4	125.8	126.6	125.0	124.6	125.6	125.6	125.3	126.0
Potatoes	142.6	133.9	106.1	132.6	136.3	120.4	116.0	106.5	147.5	126.0
Eggs for fresh use (1991=100)	86.3	105.1	97.1	90.1	71.2	86.9	80.8	91.3	88.9	92.0
Bakery products	164.3	169.8	173.9	174.6	175.8	175.7	175.6	176.0	175.5	176.2
Meats	102.9	109.0	111.6	109.8	105.5	106.0	102.9	104.5	100.4	98.1
Beef and veal	100.9	100.2	102.8	103.3	103.5	99.8	99.5	100.8	98.3	96.9
Pork	101.4	120.9	123.1	116.8	104.2	111.6	100.8	104.8	96.1	90.8
Processed poultry	114.3	119.8	117.4	117.0	116.5	120.1	124.9	127.3	129.4	126.0
Unprocessed and packaged fish	170.9	165.9	178.1	187.8	186.4	177.7	180.0	180.4	178.4	181.3
Dairy products	119.7	130.4	128.1	130.4	131.3	133.4	135.3	139.4	145.1	148.0
Processed fruits and vegetables	122.4	127.6	126.4	125.6	125.7	125.6	126.4	126.5	126.3	125.2
Shortening and cooking oil	142.5	138.5	137.8	140.0	145.1	143.0	141.5	137.3	142.5	142.7
Soft drinks	133.1	134.0	133.2	132.9	134.6	134.6	134.7	134.8	134.8	135.0
Finished consumer goods less foods	123.9	127.6	128.2	128.7	126.7	127.0	127.0	126.4	126.3	127.1
Alcoholic beverages	128.5	132.8	135.1	134.0	134.9	134.9	134.9	134.9	135.0	135.0
Apparel	124.2	125.1	125.7	125.9	126.5	126.6	126.0	126.3	126.3	126.7
Footwear	139.2	141.6	143.7	144.2	144.6	144.7	144.4	145.0	144.7	144.7
Tobacco products	231.3	237.4	248.9	256.4	278.4	278.7	278.7	286.4	287.3	287.4
Intermediate materials[3]	124.9	125.8	125.6	125.5	123.5	123.5	123.4	123.1	123.0	122.3
Materials for food manufacturing	119.5	125.3	123.2	122.4	123.7	123.0	122.6	123.3	124.6	125.3
Flour	122.8	136.8	118.7	115.4	112.4	109.0	107.8	104.0	102.8	109.1
Refined sugar[4]	119.4	123.7	123.6	121.4	119.2	120.0	120.3	119.9	120.7	119.9
Crude vegetable oils	129.8	118.1	116.6	118.0	143.7	130.8	126.3	120.4	131.4	124.3
Crude materials[5]	102.7	113.8	111.1	112.7	100.5	97.6	97.1	94.6	92.9	93.9
Foodstuffs and feedstuffs	105.8	121.5	112.2	110.1	106.2	106.2	103.8	103.0	100.9	103.4
Fruits and vegetables and nuts[6]	108.4	122.5	115.5	124.7	116.2	110.2	119.0	108.0	114.1	121.5
Grains	112.6	151.1	111.2	109.1	98.7	94.0	91.4	82.8	77.3	84.6
Slaughter livestock	92.8	95.2	96.3	93.0	90.7	90.7	81.8	82.1	79.0	78.7
Slaughter poultry, live	125.6	140.5	131.0	121.7	131.1	140.5	156.7	167.8	164.1	161.8
Plant and animal fibers	155.3	129.4	117.0	116.8	107.9	117.9	120.9	115.8	117.8	112.6
Fluid milk	93.7	107.9	97.5	101.3	98.1	104.1	107.0	114.2	119.8	126.2
Oilseeds	112.6	139.4	140.8	129.5	121.0	116.0	120.5	104.6	101.2	103.0
Leaf tobacco	78.9	89.4	--	105.5	--	--	--	93.8	104.1	109.6
Raw cane sugar	119.7	118.6	116.8	118.1	118.1	118.0	119.3	118.4	116.0	115.6

1. Commodities ready for sale to ultimate consumer. 2. Includes all raw, intermediate, and processed foods (excludes soft drinks, alcoholic beverages, and manufactured animal feeds). 3. Commodities requiring further processing to become finished goods. 4. All types and sizes of refined sugar. 5. Products entering market for the first time that have not been manufactured at that point. 6. Fresh and dried.

This table is compiled with data provided by the Bureau of Labor Statistics (BLS). BLS operates a website at http://stats.bls.gov/blshome.html and a Producer Prices Information Hotline at (202) 606-7705.

Farm-Retail Price Spreads

Table 8—Farm-Retail Price Spreads

	Annual			1997	1998					
	1995	1996	1997	Oct	May	Jun	Jul	Aug	Sep	Oct
Market basket[1]										
Retail cost (1982-84=100)	149.4	155.9	159.7	160.4	162.7	162.2	162.6	163.4	163.2	164.8
Farm value (1982-84=100)	102.7	111.1	106.2	103.6	103.4	102.9	102.7	103.2	104.9	106.4
Farm-retail spread (1982-84=100)	174.6	180.1	188.6	190.9	194.7	194.2	194.8	195.8	194.6	196.2
Farm value-retail cost (%)	24.1	24.9	23.3	22.6	22.2	22.2	22.1	22.1	22.5	22.6
Meat products										
Retail cost (1982-84=100)	135.5	140.1	144.4	145.2	141.0	141.5	141.8	142.2	141.6	141.3
Farm value (1982-84=100)	93.8	100.4	101.2	97.8	91.4	93.4	89.1	85.4	81.3	79.3
Farm-retail spread (1982-84=100)	178.2	180.9	188.6	193.8	191.9	190.9	195.9	200.4	203.5	204.9
Farm value-retail cost (%)	35.1	36.3	35.5	34.1	32.8	33.4	31.8	30.4	29.1	28.4
Dairy products										
Retail cost (1982-84=100)	132.8	142.1	145.5	145.7	148.1	148.1	148.2	150.5	152.9	155.0
Farm value (1982-84=100)	92.2	107.2	98.0	100.6	105.5	103.4	103.2	113.9	125.4	125.4
Farm-retail spread (1982-84=100)	170.3	174.3	189.3	187.3	187.4	189.3	189.7	184.3	178.3	182.3
Farm value-retail cost (%)	33.3	36.2	32.3	33.1	34.2	33.5	33.4	36.3	39.3	38.8
Poultry										
Retail cost (1982-84=100)	143.5	152.4	156.6	155.6	155.6	155.5	156.6	158.9	159.3	161.1
Farm value (1982-84=100)	113.7	126.2	120.6	114.4	117.2	126.6	135.3	145.9	143.9	139.7
Farm-retail spread (1982-84=100)	177.7	182.6	198.1	203.1	199.9	188.8	181.2	173.9	177.1	185.7
Farm value-retail cost (%)	42.4	44.3	41.2	39.3	40.3	43.6	46.2	49.1	48.3	46.4
Eggs										
Retail cost (1982-84=100)	120.5	142.1	140.0	135.9	128.6	126.3	127.5	135.4	132.4	136.1
Farm value (1982-84=100)	91.1	114.7	99.3	91.4	67.0	77.2	74.2	88.3	85.2	91.4
Farm-retail spread (1982-84=100)	173.2	191.4	213.0	215.8	239.2	214.6	223.2	220.0	217.1	216.3
Farm value-retail cost (%)	48.6	51.9	45.6	43.2	33.5	39.2	37.4	41.9	41.4	43.2
Cereal and bakery products										
Retail cost (1982-84=100)	167.5	174.0	177.6	178.4	180.5	181.6	181.8	182.7	181.9	182.2
Farm value (1982-84=100)	110.1	125.6	107.7	103.8	97.3	92.5	88.7	84.8	85.6	91.3
Farm-retail spread (1982-84=100)	175.5	180.7	187.4	188.8	192.1	194.0	194.8	196.4	195.3	194.9
Farm value-retail cost (%)	8.1	7.2	7.4	7.1	6.6	6.2	6.0	5.7	5.8	6.1
Fresh fruit										
Retail cost (1982-84=100)	226.9	243.0	245.1	254.0	258.8	256.6	255.7	259.2	260.6	265.9
Farm value (1982-84=100)	136.2	151.7	137.0	137.1	138.6	135.7	132.3	136.0	152.3	161.7
Farm-retail spread (1982-84=100)	268.7	285.2	295.0	307.9	314.3	312.4	312.7	316.0	310.6	314.0
Farm value-retail cost (%)	19.0	19.7	17.7	17.1	16.9	16.7	16.3	16.6	18.5	19.2
Fresh vegetables										
Retail cost (1982-84=100)	193.1	189.2	194.6	192.8	229.7	214.7	214.0	205.6	200.1	213.9
Farm value (1982-84=100)	130.1	113.3	118.7	113.0	134.5	105.5	134.3	104.2	103.0	133.9
Farm-retail spread (1982-84=100)	225.5	228.3	233.6	233.8	278.7	270.9	255.0	257.7	250.0	255.0
Farm value-retail cost (%)	22.9	20.3	20.7	19.9	19.9	16.7	21.3	17.2	17.5	21.3
Processed fruits and vegetables										
Retail cost (1982-84=100)	137.5	144.4	147.9	147.2	150.9	150.8	151.8	152.5	152.1	151.6
Farm value (1982-84=100)	120.5	121.5	115.9	113.1	116.7	120.6	116.7	116.1	117.8	117.9
Farm-retail spread (1982-84=100)	142.8	151.6	157.9	157.8	161.6	160.2	162.7	163.9	162.8	162.1
Farm value-retail cost (%)	20.8	20.0	18.6	18.3	18.4	19.0	18.3	18.1	18.4	18.5
Fats and oils										
Retail cost (1982-84=100)	137.3	140.5	141.7	141.7	141.2	143.3	147.6	149.7	152.4	156.8
Farm value (1982-84=100)	121.3	112.3	109.4	113.0	128.1	119.6	114.9	112.9	120.5	117.5
Farm-retail spread (1982-84=100)	143.1	150.9	153.6	152.3	146.0	152.0	159.6	163.2	164.1	171.3
Farm value-retail cost (%)	23.8	21.5	20.8	21.4	24.4	22.5	20.9	20.3	21.3	20.1

See footnotes at end of table, next page.

Table 8—Farm-Retail Price Spreads (continued)

	Annual			1997	1998					
	1995	1996	1997	Oct	May	Jun	Jul	Aug	Sep	Oct
Beef, All Fresh Retail Price (cts/lb)	259.4	252.4	253.8	254.0	254.4	251.7	251.9	255.1	250.6	252.6
Beef, Choice										
Retail price (cents/lb.)[2]	284.4	280.2	279.5	279.0	277.4	278.7	278.5	279.4	274.2	275.0
Wholesale value (cents)[3]	163.9	158.1	158.2	158.7	157.0	154.5	154.0	160.6	153.2	156.4
Net farm value (cents)[4]	138.4	134.9	137.2	138.2	137.1	134.8	128.6	126.1	124.6	130.9
Farm-retail spread (cents)	146.0	145.3	142.3	140.8	140.3	143.9	149.9	153.3	149.6	144.1
Wholesale-retail (cents)[5]	120.5	122.1	121.3	120.3	120.4	124.2	124.5	118.8	121.0	118.6
Farm-wholesale (cents)[6]	25.5	23.2	21.0	20.5	19.9	19.7	25.4	34.5	28.6	25.5
Farm value-retail price (%)	49	48	49	50	49	48	46	45	45	48
Pork										
Retail price (cents/lb.)[2]	194.8	220.9	231.5	234.9	226.7	228.9	231.0	230.9	231.2	230.2
Wholesale value (cents)[3]	98.8	117.2	117.1	110.5	99.8	98.0	94.9	96.4	93.2	91.1
Net farm value (cents)[4]	66.7	84.6	81.1	73.2	66.3	65.8	57.6	55.4	47.9	42.0
Farm-retail spread (cents)	128.1	136.3	150.4	161.7	160.4	163.1	173.4	175.5	183.3	188.2
Wholesale-retail (cents)[5]	96.0	103.7	114.4	124.4	126.9	130.9	136.1	134.5	138.0	139.1
Farm-wholesale (cents)[6]	32.1	32.6	36.0	37.3	33.5	32.2	37.3	41.0	45.3	49.1
Farm value-retail price (%)	34	38	35	31	29	29	25	24	21	18

1. Retail costs are based on CPI-U of retail prices for domestically produced farm foods, published monthly by the Bureau of Labor Statistics (BLS). Farm value is the payment for the quantity of farm equivalent to the retail unit, less allowance for by-product. Farm values are based on prices at first point of sale, and may include marketing charges such as grading and packing for some commodities. The farm-retail spread, the difference between the retail price and farm value, represents charges for assembling, processing, transporting, distributing. 2. Weighted-average price of retail cuts from pork and Choice yield grade 3 beef. Prices from BLS. 3. Value of wholesale (boxed beef) and wholesale cuts (pork) equivalent to 1 lb. of retail cuts adjusted for transportation costs and by-product values. 4. Market value to producer for live animal equivalent to 1 lb. of retail cuts, minus value of by-products. 5. Charges for retailing and other marketing services such as wholesaling, and in-city transportation. 6. Charges for livestock marketing, processing, and transportation. *Information contact: Veronica Jones (202) 694-5387, Larry Duewer (202) 694-5172*

Table 9—Price Indexes of Food Marketing Costs

	Annual			1996	1997				1998	
	1995	1996	1997	IV	I	II	III	IV	I	II
					*1987=100**					
Labor--hourly earnings and benefits	455.2	459.7	474.3	465.3	469.3	473.0	474.6	480.2	484.9	488.3
Processing	472.5	474.7	486.0	480.2	481.4	484.9	487.1	490.5	493.8	497.7
Wholesaling	502.2	516.0	536.2	520.5	526.2	534.1	538.9	545.4	546.8	552.5
Retailing	417.1	419.9	435.2	426.1	432.1	434.1	433.6	441.1	448.7	450.6
Packaging and containers	415.7	399.8	390.3	393.1	392.1	388.7	387.6	392.9	398.5	396.7
Paperboard boxes and containers	392.1	363.8	341.9	348.9	347.2	335.4	334.7	350.3	365.4	368.7
Metal cans	504.9	498.3	491.0	481.8	489.4	496.1	490.8	487.9	494.1	484.7
Paper bags and related products	457.8	437.8	441.9	443.3	443.8	441.6	439.5	442.5	438.8	434.0
Plastic films and bottles	330.6	326.5	326.6	331.9	326.6	325.3	326.9	327.5	326.7	325.0
Glass containers	463.3	460.5	447.4	459.3	449.3	446.9	446.6	446.6	446.9	446.9
Metal foil	263.1	235.7	233.4	229.9	228.2	232.0	237.2	236.4	232.2	232.2
Transportation services	436.6	429.8	430.0	430.2	431.0	430.6	429.0	429.4	429.9	431.8
Advertising	539.1	580.1	609.4	582.8	608.1	608.7	609.3	611.6	623.2	624.2
Fuel and power	633.7	670.7	668.5	699.2	689.5	657.4	658.1	669.0	625.1	622.9
Electric	511.3	501.3	499.2	492.6	488.5	499.0	517.7	491.5	482.2	489.3
Petroleum	559.7	666.8	616.7	745.5	672.8	609.7	574.8	609.6	495.5	470.0
Natural gas	1,091.7	1,136.7	1,214.0	1,180.9	1,261.1	1,165.7	1,179.7	1,249.4	1,229.4	1,242.1
Communications, water and sewage	284.9	296.8	302.8	299.1	301.1	302.2	303.5	304.2	305.5	308.0
Rent	269.0	268.2	265.6	268.3	266.6	265.6	265.1	265.1	262.5	260.3
Maintenance and repair	486.1	499.6	514.9	506.2	509.6	513.0	517.3	519.7	524.1	527.1
Business services	491.0	501.7	512.3	506.6	509.5	511.7	513.9	514.1	518.4	521.2
Supplies	342.7	338.3	337.8	339.0	338.8	337.0	337.5	337.9	335.6	332.4
Property taxes and insurance	546.8	564.3	580.1	570.4	573.6	577.3	582.2	587.3	591.1	595.4
Interest, short-term	113.5	103.9	108.9	104.2	105.3	111.2	108.8	110.1	106.5	106.7
Total marketing cost index	444.8	452.1	459.9	455.6	458.6	458.4	459.1	463.4	465.3	466.9

Last two quarters preliminary. * Indexes measure changes in employee earnings and benefits and in prices of supplies used in processing, wholesaling, and retailing U.S. farm foods purchased for at-home consumption. *Information contact: Veronica Jones (202) 694-5387*

Livestock & Products

Table 10—U.S. Meat Supply & Use

	Beg. stocks	Produc-tion[1]	Imports	Total supply	Exports	Ending stocks	Consumption Total	Consumption Per capita[2]	Conversion factor[3]	Primary market price[4]
				Million lbs.[5]				*lbs.*		*$/cwt*
Beef										
1995	548	25,222	2,103	27,873	1,821	519	25,533	67	0.695	66
1996	519	25,525	2,073	28,117	1,877	377	25,863	68	0.700	65
1997	377	25,490	2,343	28,210	2,136	465	25,609	67	0.700	66
1998	465	25,695	2,626	28,786	2,135	400	26,251	68	0.700	62.47
1999	400	24,031	2,790	27,221	2,315	350	24,556	63	0.700	70-75
Pork										
1995	438	17,849	664	18,951	787	396	17,768	52	0.776	42
1996	396	17,117	618	18,131	970	366	16,795	49	0.776	53
1997	366	17,274	633	18,273	1,044	408	16,821	49	0.776	51
1998	408	18,874	660	19,942	1,260	475	18,207	52	0.776	32.87
1999	475	19,455	700	20,630	1,340	490	18,800	54	0.776	33-35
Veal[6]										
1995	7	319	0	326	0	7	319	1	0.83	75
1996	7	378	0	385	0	7	378	1	0.83	59
1997	7	334	0	341	0	8	333	1	0.83	82
1998	8	266	0	274	0	6	268	1	0.83	82
1999	6	255	0	261	0	6	255	1	0.83	94
Lamb and mutton										
1995	11	287	64	362	6	8	348	1	0.89	76
1996	8	268	73	349	6	9	334	1	0.89	85
1997	9	260	83	352	5	14	333	1	0.89	88
1998	14	243	93	350	5	11	334	1	0.89	74
1999	11	223	85	319	5	11	303	1	0.89	77
Total red meat										
1995	1,004	43,677	2,831	47,512	2,614	930	43,968	122	--	--
1996	930	43,288	2,764	46,982	2,853	759	43,370	120	--	--
1997	759	43,358	3,059	47,176	3,185	895	43,096	118	--	--
1998	895	45,078	3,379	49,352	3,400	892	45,060	122	--	--
1999	892	43,964	3,575	48,431	3,660	857	43,914	118	--	--
										¢/lb
Broilers										
1995	458	24,827	1	25,287	3,894	560	20,832	69	0.869	56
1996	560	26,124	4	26,688	4,420	641	21,626	71	0.869	61
1997	641	27,041	5	27,687	4,664	607	22,416	73	0.869	59
1998	607	27,531	5	28,142	4,683	625	22,834	73	0.869	62.70
1999	625	28,943	4	29,572	4,525	650	24,397	78	0.869	56-60
Mature chickens										
1995	14	496	3	513	99	7	406	2	1.0	--
1996	7	491	0	498	265	6	228	1	1.0	--
1997	6	510	0	516	384	7	125	1	1.0	--
1998	7	521	0	528	435	7	86	1	1.0	--
1999	7	546	0	554	412	5	137	1	1.0	--
Turkeys										
1995	254	5,069	2	5,326	348	271	4,706	18	1.0	66
1996	271	5,401	1	5,673	438	328	4,906	19	1.0	66
1997	328	5,412	1	5,741	598	415	4,727	18	1.0	65
1998	415	5,173	1	5,589	421	300	4,867	18	1.0	61.90
1999	300	5,186	1	5,487	430	275	4,781	18	1.0	60-64
Total poultry										
1995	727	30,393	6	31,125	4,342	839	25,944	88	--	--
1996	839	32,015	5	32,859	5,123	975	26,760	90	--	--
1997	975	32,964	6	33,944	5,646	1,029	27,269	91	--	--
1998	1,029	33,225	6	34,260	5,539	932	27,788	92	--	--
1999	932	34,675	5	35,612	5,367	930	29,314	96		
Red meat and poultry										
1995	1,731	74,070	2,837	78,637	6,956	1,769	69,912	210	--	--
1996	1,769	75,303	2,769	79,841	7,976	1,734	70,130	210	--	--
1997	1,734	76,322	3,065	81,120	8,831	1,924	70,364	209	--	--
1998	1,924	78,303	3,385	83,612	8,939	1,824	72,848	214	--	--
1999	1,824	78,639	3,580	84,043	9,027	1,787	73,228	214	--	--

-- = Not available. Values for the last year are forecasts. 1. Total including farm production for red meat and federally inspected plus nonfederally inspected for poultry. 2. Retail-weight basis. 3. Red meat, carcass to retail conversion; poultry, ready-to-cook production to retail weight. 4. Beef: Medium #1, Nebraska Direct 1,100-1,300 lb.; pork: barrows and gilts, Iowa, Southern Minnesota; veal: farm price of calves; lamb and mutton: choice slaughter lambs, San Angelo; broilers: wholesale 12-city average; turkeys: wholesale NY 8-16 lb. young hens. 5. Carcass weight for red meats and certified ready-to-cook for poultry. 6. Beginning in 1989, veal trade is no longer reported separately. *Information contact: LaVerne Williams (202) 694-5190*

Table 11—U.S. Egg Supply & Use

	Beg. stocks	Production	Imports	Total supply	Exports	Hatching use	Ending stocks	Consumption: Total	Consumption: Per capita	Primary market price*
		Million doz.							No.	¢/doz.
1992	13.0	5,905.0	4.3	5,922.3	157.0	732.0	13.5	5,019.8	235.9	65.4
1993	13.5	6,005.8	4.7	6,023.9	158.9	769.6	10.7	5,084.6	236.4	72.5
1994	10.7	6,177.6	3.7	6,192.0	187.6	805.4	14.9	5,184.1	238.7	67.3
1995	14.9	6,215.6	4.1	6,234.6	208.9	847.2	11.2	5,167.3	235.6	72.9
1996	11.2	6,371.3	5.4	6,387.9	253.1	863.8	8.5	5,262.4	237.8	88.2
1997	8.5	6,459.8	6.9	6,475.2	227.8	894.8	7.4	5,345.2	239.4	81.2
1998	7.4	6,635.3	5.9	6,648.6	226.2	921.6	5.0	5,495.8	244.1	76.1
1999	5.0	6,790.0	4.0	6,799.0	243.0	970.0	5.0	5,581.0	245.5	72.5

Values for the last year are forecasts. Values for previous year are preliminary. * Cartoned grade A large eggs, New York.
Information contact: LaVerne Williams (202) 694-5190

Table 12—U.S. Milk Supply & Use[1]

	Production	Commercial: Farm use	Commercial: Farm Marketings	Commercial: Beg. stocks	Imports	Total commercial supply	Commercial: CCC net removals	Commercial: Ending stocks	Commercial: Disappearance	All milk price[1]	CCC net removals: Skim solids basis	CCC net removals: Total solid basis[2]
	Billion lbs. (milkfat basis)									$/cwt	Billion lbs.	
1991	147.7	2.0	145.7	5.1	2.6	153.4	10.4	4.5	138.6	12.24	3.9	6.5
1992	150.9	1.9	149.0	4.5	2.5	155.9	9.9	4.7	141.3	13.09	2.0	5.2
1993	150.6	1.8	148.8	4.7	2.8	156.2	6.7	4.6	145.0	12.80	3.9	5.0
1994	153.7	1.7	152.0	4.6	2.9	159.4	4.8	4.3	150.3	12.97	3.7	4.2
1995	155.4	1.6	153.9	4.3	2.9	161.1	2.1	4.1	154.9	12.74	4.4	3.5
1996	154.3	1.5	153.8	4.1	2.9	159.8	0.1	4.7	155.0	14.74	0.7	0.5
1997	156.6	1.4	155.2	4.7	2.7	162.6	1.1	4.9	156.6	13.34	3.7	2.7
1998	157.4	1.4	156.0	4.9	4.6	165.5	0.4	5.1	160.1	15.30	4.0	2.6
1999	160.1	1.3	158.8	5.1	3.3	167.2	0.7	4.9	161.6	14.15	3.6	2.4

Values for latest year are forecasts. Values for the preceding year are preliminary. 1. Delivered to plants and dealers; does not reflect deductions.
2. Arbitrarily weighted average of milkfat basis (40 percent) and solids basis (60 percent). *Information contact: Jim Miller (202) 694-5184*

Table 13—Poultry & Eggs

	Annual			1997	1998					
	1995	1996	1997	Sep	Apr	May	Jun	Jul	Aug	Sep
Broilers										
Federally inspected slaughter certified (mil. lb.)	25,020.8	26,336.3	27,270.7	2,283.9	2,384.0	2,258.1	2,348.8	2,353.8	2,265.0	2,315.6
Wholesale price, 12-city (cents/lb.)	56.2	61.2	58.8	59.9	58.8	60.1	64.3	68.5	72.1	70.5
Price of grower feed ($/ton)[1]	135.1	175.5	157.8	147.0	138.0	137.0	134.0	131.0	116.0	112.0
Broiler-feed price ratio[2]	5.1	4.4	4.7	5.2	5.3	5.4	6.0	6.6	8.1	8.2
Stocks beginning of period (mil. lb.)	458.4	560.1	641.3	559.1	665.8	710.3	654.7	583.5	553.2	541.2
Broiler-type chicks hatched (mil.)	7,932.4	8,076.9	8,306.5	684.2	709.4	740.0	719.0	723.4	713.2	692.9
Turkeys										
Federally inspected slaughter certified (mil. lb.)	5,128.8	5,465.6	5,477.9	462.6	442.3	421.2	457.9	459.3	413.4	428.1
Wholesale price, Eastern U.S. 8-16 lb. young hens (cents/lb.)	66.4	66.5	64.9	67.9	58.1	58.7	60.6	61.4	63.2	65.6
Price of turkey grower feed ($/ton)[1]	130.1	166.1	142.5	135.0	125.0	122.0	118.0	115.0	102.0	99.0
Turkey-feed price ratio[2]	6.3	5.3	5.6	6.1	5.7	5.8	6.1	6.5	7.6	8.1
Stocks beginning of period (mil. lb.)	254.4	271.3	328.0	742.0	527.0	580.2	612.9	656.5	703.0	708.8
Poults placed in U.S. (mil.)	321.7	327.2	321.5	23.9	25.7	25.7	27.0	26.2	24.5	21.1
Eggs										
Farm production (mil.)	74,587	76,456	77,515	6,350	6,571	6,630	6,423	6,695	6,675	6,458
Average number of layers (mil.)	294	298	303	303	311	308	308	308	308	310
Rate of lay (eggs per layer on farms)	253.8	256.2	255.2	21.0	21.1	21.5	20.9	21.7	21.6	20.8
Cartoned price, New York, grade A large (cents/doz.)[3]	72.9	88.2	81.2	82.4	71.6	60.4	67.3	73.3	77.7	77.0
Price of laying feed ($/ton)[1]	149.7	184.4	159.8	150.0	149.0	161.0	150.0	148.0	121.0	119.0
Egg-feed price ratio[2]	8.6	8.5	8.8	9.3	8.5	6.8	8.0	7.9	10.7	10.7
Stocks, first of month Frozen (mil. doz.)	14.8	10.5	7.7	8.4	7.9	7.0	9.8	7.7	8.9	6.8
Replacement chicks hatched (mil.)	397.0	407.0	422.0	37.2	39.9	39.6	39.2	36.6	33.5	38.6

1. Calculated from price ratios that were revised February 1995. 2. Pounds of feed equal in value to 1 dozen eggs or 1 lb. of broiler or turkey liveweight (revised February 1995). 3. Price of cartoned eggs to volume buyers for delivery to retailers. *Information contact: LaVerne Williams (202) 694-5190*

Table 14—Dairy

	Annual		1997	1998					
	1995	1996	1997	Sep	Apr	May	Jun	Jul	Aug	Sep
Milk--Basic Formula Price ($/cwt)[1]	11.83	13.39	12.05	12.79	12.01	10.88	13.10	14.77	14.99	15.10
Wholesale prices										
Butter, Central States (cents/lb.)[2]	81.9	108.2	116.2	109.3	136.4	153.2	186.7	203.1	216.6	270.8
Am. cheese, Wis. assembly pt. (cents/lb.)	132.8	149.1	132.4	141.4	129.7	123.0	151.3	162.6	166.9	171.0
Nonfat dry milk (cents/lb.)[3]	108.6	122.2	110.0	107.1	104.3	103.5	102.9	103.0	104.6	110.1
USDA net removals										
Total (mil. lb.)[4]	2,105.7	86.9	1,090.0	103.4	25.9	23.8	12.8	15.4	13.8	15.3
Butter (mil. lb.)	78.5	0.1	38.4	3.8	0.4	0.3	0.0	0.0	0.0	0.0
Am. cheese (mil. lb.)	6.1	4.6	11.3	0.4	0.7	0.6	0.6	0.7	0.8	0.7
Nonfat dry milk (Mil. lb.)	343.8	57.2	298.0	34.7	28.1	37.9	29.9	38.6	28.2	19.9
Milk										
Milk prod. 20 states (mil. lb.)	131,780	131,343	133,861	10,671	11,591	12,067	11,446	11,345	11,160	10,706
Milk per cow (lb.)	16,762	16,800	17,252	1,377	1,499	1,557	1,476	1,464	1,439	1,382
Number of milk cows (1,000)	7,862	7,818	7,759	7,752	7,735	7,750	7,753	7,750	7,753	7,749
U.S. milk production (mil. lb.)[5]	155,424	154,259	156,602	12,423	13,520	14,070	13,341	13,223	13,002	12,469
Stocks, beginning[4]										
Total (mil. lb.)	5,760	4,168	4,714	6,845	6,009	6,488	6,689	6,664	6,591	6,213
Commercial (mil. lb.)	4,263	4,099	4,704	6,813	5,990	6,460	6,663	6,637	6,554	6,173
Government (mil. lb.)	1,497	69	10	32	20	28	26	27	38	40
Imports, total (mil. lb.)[4]	2,936	2,911	2,698	228	279	297	369	533	559	--
Commercial disappearance (mil. lb.)[4]	154,843	154,985	156,597	13,305	13,192	14,026	13,612	13,709	13,815	--
Butter										
Production (mil. lb.)	1,264.5	1,174.5	1,151.2	79.3	103.0	92.9	72.6	67.1	61.5	67.2
Stocks, beginning (mil. lb.)	79.4	18.6	13.7	69.5	55.9	67.4	72.7	60.5	51.0	41.1
Commercial disappearance (mil. lb.)	1,186.3	1,179.8	1,108.7	101.0	92.4	88.0	89.2	86.8	84.6	--
American cheese										
Production (mil. lb.)	3,131.4	3,280.8	3,285.2	261.2	289.7	293.1	287.8	277.3	261.1	246.1
Stocks, beginning (mil. lb.)	310.4	307.0	379.9	461.0	421.5	442.2	443.2	450.1	460.9	441.7
Commercial disappearance (mil. lb.)	3,148.5	3,230.1	3,268.6	287.9	272.3	295.1	282.9	269.0	281.1	--
Other cheese										
Production (mil. lb.)	3,785.5	3,936.7	4,043.8	343.0	351.6	360.0	353.3	335.3	334.9	335.5
Stocks, beginning (mil. lb.)	126.8	105.3	107.3	122.8	98.2	103.1	108.8	133.6	134.4	135.2
Commercial disappearance (mil. lb.)	4,125.6	4,243.0	4,365.5	381.4	368.1	377.9	352.2	363.0	360.9	--
Nonfat dry milk										
Production (mil. lb.)	1,233.0	1,061.8	1,271.6	77.4	120.4	121.3	104.2	90.2	75.5	63.0
Stocks, beginning (mil. lb.)	131.2	85.0	71.4	160.0	128.9	161.2	186.8	198.2	203.3	185.6
Commercial disappearance (mil. lb.)	923.7	1,009.0	894.1	63.9	73.1	65.4	80.1	69.8	85.5	--
Frozen dessert										
Production (mil. gal.)[6]	1,229.6	1,240.9	1,281.4	103.3	115.4	118.9	132.2	135.0	122.0	112.1

	Annual			1997				1998		
	1995	1996	1997	I	II	III	IV	I	II	III
Milk production (mil. lb.)	155,424	154,259	156,602	38,961	40,683	38,805	38,153	39,209	40,931	38,694
Milk per cow (lb.)	16,433	16,479	16,915	4,192	4,384	4,195	4,144	4,268	4,447	4,205
No. of milk cows (1,000)	9,458	9,361	9,258	9,295	9,280	9,251	9,206	9,186	9,205	9,201
Milk-feed price ratio	1.63	1.60	1.54	1.54	1.45	1.47	1.71	1.73	1.71	2.05
Returns over concentrate costs ($/cwt milk)	9.50	10.98	9.80	9.85	9.05	9.05	11.00	11.10	10.40	12.25

-- = Not available. Quarterly values for latest year are preliminary. 1. Manufacturing grade milk. 2. Grade AA Chicago before June 1998. 3. Prices paid f.o.b. Central States production area. 4. Milk equivalent, fat basis. 5. Monthly data ERS estimates. 6. Hard ice cream, ice milk, and hard sherbet. *Information contact: LaVerne Williams (202) 694-5190*

Table 15—Wool

	Annual			1996	1997				1998	
	1995	1996	1997	IV	I	II	III	IV	I	II
U.S. wool price (¢/lb.)[1]	258	193	238	191	196	244	255	258	209	178
Imported wool price (¢/lb.)[2]	249	196	206	191	196	210	213	204	192	176
U.S. mill consumption, scoured										
Apparel wool (1,000 lb.)	129,299	129,525	130,386	23,092	33,124	33,830	30,638	32,794	29,208	29,591
Carpet wool (1,000 lb.)	12,667	12,311	13,576	3,111	3,437	3,324	3,395	3,420	3,549	3,729

1. Wool price delivered at U.S. mills, clean basis, Graded Territory 64ís (20.60-22.04 microns) staple 2-3/4" and up. 2. Wool price, Charleston, SC warehouse, clean basis, Australian 60/62ís, type 64A (24 micron). Duty since 1982 has been 10 cents. *Information contact:* Mae Dean Johnson (202) 694-5299

Table 16—Meat Animals

	Annual			1997	1998					
	1995	1996	1997	Oct	May	Jun	Jul	Aug	Sep	Oct
Cattle on feed (7 states, 1000+ head capacity)										
Number on feed (1,000 head)[1]	8,031	8,667	8,943	8,558	8,295	8,289	7,825	8,985	7,750	8,376
Placed on feed (1,000 head)	20,034	19,564	20,765	2,454	1,740	1,314	1,677	2,031	2,254	2,396
Marketings (1,000 head)	18,753	18,636	19,552	1,545	1,681	1,727	1,755	1,942	1,577	1,532
Other disappearance (1,000 head)	674	652	701	77	65	51	41	52	51	45
Market prices ($/cwt)										
Slaughter cattle										
Choice steers, 1,100-1,300 lb.										
Texas	66.69	65.06	65.99	66.93	64.52	63.85	60.28	58.75	57.93	61.54
Neb. direct	66.26	65.05	66.32	67.08	64.40	63.26	59.97	58.65	58.28	62.00
Boning utility cows, Sioux Falls	35.58	30.33	34.27	31.71	39.30	39.61	36.11	36.06	33.47	31.60
Feeder steers										
Medium no. 1, Oklahoma City										
600-650 lb.	70.49	61.31	81.34	79.55	85.86	77.40	72.96	72.24	70.37	71.67
750-800 lb.	68.03	61.08	76.19	76.84	73.95	73.10	69.13	66.93	67.61	71.26
Slaughter hogs										
Barrows and gilts, 230-250 lb.										
Iowa, S. Minn.	42.35	53.39	51.36	46.62	42.00	41.57	35.91	35.11	29.37	26.98
5 markets	41.99	53.42	51.30	46.17	41.74	41.40	36.07	34.62	30.18	26.91
Sows, 5 markets	32.62	44.61	44.51	39.32	30.37	30.54	26.77	23.39	19.83	20.98
Slaughter sheep and lambs										
Lambs, Choice, San Angelo	75.86	85.27	87.95	82.75	73.00	91.21	82.21	82.05	69.50	67.20
Ewes, Good, San Angelo	33.91	39.05	49.33	45.44	35.13	37.88	36.21	35.55	36.00	33.75
Feeder lambs										
Choice, San Angelo	81.08	94.88	104.43	96.31	76.56	88.00	76.43	82.05	74.75	70.10
Wholesale meat prices, Midwest										
Boxed beef cut-out value										
Choice, 700-800 lb.	106.09	102.01	102.75	102.86	101.49	99.58	98.46	102.16	96.66	101.09
Select, 700-800 lb.	98.45	95.34	96.15	93.27	92.24	94.71	90.41	90.65	90.59	87.41
Canner and cutter cow beef	68.67	58.18	64.50	59.76	66.58	63.50	62.83	62.13	56.50	55.22
Pork cutout	--	--	--	--	63.94	62.45	57.62	57.25	50.72	48.18
Pork loins, bone-in, 1/4 " trim,14-19 lb.	126.99	138.73	128.75	99.68	130.64	113.13	106.51	105.90	97.23	99.63
Pork bellies, 12-14 lb.	43.04	69.96	73.91	57.97	57.87	63.10	68.46	72.99	57.49	42.05
Hams, bone-in, trimmed, 23-27 lb.	--	--	--	--	47.11	50.25	47.06	46.00	45.01	44.75
All fresh beef retail price	259.42	252.44	253.72	254.02	254.45	251.66	251.93	255.11	250.61	252.62
Commercial slaughter (1,000 head)[2]										
Cattle	35,639	36,583	36,351	3,224	2,958	3,109	3,039	3,040	2,992	3,053
Steers	18,274	17,819	17,554	1,444	1,486	1,599	1,569	1,554	1,451	1,515
Heifers	10,399	10,756	11,538	1,092	962	967	929	950	987	1,069
Cows	6,281	7,274	6,563	624	457	488	489	483	500	528
Bull and stags	686	728	696	64	53	55	52	53	54	53
Calves	1,430	1,768	1,574	141	102	116	133	125	135	125
Sheep and lambs	4,560	4,184	3,911	335	281	294	281	275	306	323
Hogs	96,326	92,394	91,566	8,777	7,572	7,730	8,269	8,168	8,601	9,349
Barrows and gilts	91,683	88,224	88,253	8,439	7,269	7,391	7,902	7,822	8,255	9,000
Commercial production (mil. lb.)										
Beef	25,117	25,421	25,384	2,300	2,124	2,249	2,213	2,228	2,197	2,235
Veal	307	368	323	28	19	20	21	20	20	21
Lamb and mutton	284	265	257	22	19	19	18	17	19	20
Pork	17,810	17,084	17,245	1,652	3,582	1,444	1,529	1,505	1,591	1,757

	Annual			1997				1998		
	1995	1996	1997	I	II	III	IV	I	II	III
Hogs and pigs (U.S.)[3]										
Inventory (1,000 head)[1]	59,990	58,264	56,141	56,141	55,838	58,263	61,163	60,915	60,070	61,600
Breeding (1,000 head)[1]	7,060	6,839	6,667	6,667	6,842	6,960	6,944	6,986	6,986	7,018
Market (1,000 head)[1]	52,930	51,425	49,474	49,474	48,996	51,303	54,219	53,929	53,084	54,582
Farrowings (1,000 head)	11,847	11,187	11,440	2,702	2,944	2,959	2,929	2,898	3,055	3,034
Pig crop (1,000 head)	98,515	94,956	98,972	23,264	25,471	25,796	25,315	25,164	26,714	--
Cattle on Feed, 7 states (1,000 head)[4]										
Steers and Steer Calves	5,218	5,588	5,410	5,410	5,417	4,615	5,147	5,803	5,245	4,609
Heifers and Heifer Calves	2,785	3,005	3,455	3,455	3,431	3,026	3,383	3,615	3,325	3,191
Cows and Bulls	30	74	78	78	56	38	28	37	37	26

-- = Not available. 1. Beginning of period. 2. Classes estimated. 3. Quarters are Dec. of preceding year to Feb. (I), Mar.-May (II), June-Aug. (III), and Sept.-Nov. (IV). 4. Beginning of period. The 7 states include AZ, CA, CO, IA, KS, NE, and TX. *Information contact: Leland Southard (202) 694-5187*

Crops & Products

Table 17—Supply & Utilization[1,2]

	Area						Feed	Other				
	Set aside[3]	Planted	Harvested	Yield	Production	Total supply[4]	& residual	domestic use	Exports	Total use	Ending stocks	Farm price[5]
	Mil. Acres			*Bu./acre*				*Mil. bu.*				*$/bu.*
Wheat												
1994/95	5.2	70.3	61.8	37.6	2,321	2,981	344	942	1,188	2,475	507	3.45
1995/96	6.1	69.1	60.9	35.8	2,183	2,757	153	987	1,241	2,381	376	4.55
1996/97	--	75.6	62.9	36.3	2,285	2,753	314	995	1,001	2,310	444	4.30
1997/98*	--	71.0	63.6	39.7	2,527	3,065	293	1,010	1,040	2,342	722	3.38
1998/99*	--	66.2	59.1	43.3	2,557	3,370	375	1,018	1,150	2,543	827	2.55-2.75
	Mil. acres			*lb./acre*			*Mil. cwt (rough equiv)*					*$/cwt*
Rice[6]												
1994/95	0.3	3.4	3.3	5,964.0	197.8	230.9	--	6/ 100.7	98.9	199.6	31.3	6.78
1995/96	0.5	3.1	3.1	5,621.0	173.9	212.6	--	6/ 104.6	83.0	187.6	25.0	9.15
1996/97	--	2.8	2.8	6,121.0	171.3	206.3	--	6/ 100.7	78.4	179.1	27.2	9.96
1997/98*	--	3.1	3.0	5,896.0	178.9	215.3	--	6/ 102.4	85.2	187.6	27.7	9.64
1998/99*	--	3.2	3.2	5,660.0	180.4	218.0	--	6/ 108.4	85.0	193.4	24.6	9.00-9.50
	Mil. acres			*Bu./acre*				*Mil. bu.*				*$/bu.*
Corn												
1994/95	2.4	79.2	72.9	138.6	10,103	10,962	5,523	1,704	2,177	9,405	1,558	2.26
1995/96	7.7	71.2	65.0	113.5	7,374	8,948	4,682	1,612	2,228	8,522	426	3.24
1996/97	--	79.5	73.1	127.1	9,293	9,733	5,362	1,692	1,795	8,849	883	2.71
1997/98*	--	80.2	73.7	127.0	9,366	10,258	5,664	1,782	1,504	8,950	1,308	2.45
1998/99*	--	80.8	73.8	133.3	9,836	11,154	5,850	1,850	1,675	9,375	1,779	1.80-2.20
	Mil. acres			*Bu./acre*				*Mil bu.*				$/bu.
Sorghum												
1994/95	1.6	9.8	8.9	72.8	649	697	380	22	223	625	72	2.13
1995/96	1.7	9.5	8.3	55.6	460	532	297	19	198	514	18	3.19
1996/97	--	13.2	11.9	67.5	803	821	524	45	205	774	47	2.34
1997/98*	--	10.1	9.4	69.5	653	701	385	55	212	652	49	2.20
1998/99*	--	9.7	7.8	66.5	521	570	275	45	195	515	55	1.65-2.05
	Mil. acres			*Bu./acre*				*Mil. bu.*				*$/bu.*
Barley												
1994/95	2.7	7.2	6.7	56.2	375	580	228	173	66	467	113	2.03
1995/96	2.9	6.7	6.3	57.3	360	513	179	172	62	413	100	2.89
1996/97	--	7.1	6.8	58.5	396	532	220	172	31	423	109	2.74
1997/98*	--	6.9	6.4	58.3	374	524	158	172	74	404	120	2.38
1998/99*	--	6.5	6.0	59.9	358	508	185	172	35	392	116	1.80-2.10
	Mil. acres			*Bu./acre*				*Mil. bu.*				*$/bu.*
Oats												
1994/95	0.6	6.6	4.0	57.1	229	428	234	92	1	327	101	1.22
1995/96	0.8	6.3	3.0	54.7	162	343	183	92	2	277	66	1.67
1996/97	--	4.7	2.7	57.8	155	319	155	95	3	252	67	1.96
1997/98*	--	5.2	2.9	60.5	176	341	170	95	2	267	74	1.60
1998/99*	--	4.9	2.8	60.5	170	334	165	95	2	262	72	1.10-1.20
	Mil. acres			*Bu./acre*				*Mil. bu.*				*$/bu.*
Soybeans[7]												
1994/95	--	61.7	60.9	41.4	2,517	2,731	153	1,405	838	2,396	335	5.48
1995/96	--	62.6	61.6	35.3	2,177	2,516	112	1,370	851	2,333	183	6.72
1996/97	--	64.2	63.4	37.6	2,382	2,575	126	1,436	882	2,443	131	7.35
1997/98*	--	70.6	69.6	38.8	2,703	2,839	171	1,597	870	2,639	200	6.45
1998/99*	--	72.7	71.6	38.6	2,763	2,968	148	1,615	840	2,603	365	5.15-5.75
								Mil. lbs.				*¢/lb.*
Soybean oil												
1994/95	--	--	--	--	15,613	16,733	--	12,916	2,680	15,597	1,137	27.58
1995/96	--	--	--	--	15,240	16,472	--	13,465	992	14,457	2,015	24.75
1996/97	--	--	--	--	15,752	17,821	--	14,263	2,037	16,300	1,520	22.50
1997/98*	--	--	--	--	18,143	19,721	--	15,162	3,175	18,337	1,384	25.84
1998/99*	--	--	--	--	18,250	19,690	--	15,400	2,700	18,100	1,590	25.50-28.00
								1,000 tons				*$/ton*[8]
Soybean meal												
1994/95	--	--	--	--	33,270	33,483	--	26,542	6,717	33,260	223	162.6
1995/96	--	--	--	--	32,527	32,826	--	26,611	6,002	32,613	212	236.0
1996/97	--	--	--	--	34,210	34,524	--	27,320	6,994	34,314	210	270.9
1997/98*	--	--	--	--	38,171	38,436	--	28,868	9,350	38,218	218	185.5
1998/99*	--	--	--	--	38,232	38,500	--	29,600	8,650	38,250	250	135-155

See footnotes at end of table, next page

Table 17—Supply & Utilization (continued)

	Area											
	Set aside[3]	Planted	Harvested	Yield	Production	Total Supply[4]	Feed & residual	Other domestic use	Exports	Total Use	Ending stocks	Farm price[5]
	Mil. Acres			*Lb./acre*	*Mil. Bales*							*¢/lb.*
Cotton[9]												
1994/95	1.7	13.7	13.3	709	19.7	23.2	--	11.2	9.4	20.6	2.7	72.0
1995/96	0.3	16.9	16.0	537	17.9	21.0	--	10.6	7.7	18.3	2.6	75.4
1996/97	--	14.6	12.9	707	18.9	22.0	--	11.1	6.9	18.0	4.0	69.3
1997/98*	--	13.8	13.3	680	18.8	22.8	--	11.3	7.5	18.8	3.9	65.2
1998/99*	--	12.9	10.4	612	13.2	17.4	--	10.6	4.5	15.1	2.3	--

-- = Not available or not applicable. *November 10, 1998 Supply and Demand Estimates. 1. Marketing year beginning June1 for wheat, barley, and oats; August 1 for cotton and rice; September 1 for soybeans, corn, and sorghum; October 1 for soymeal and soyoil. 2. Conversion factors: Hectare (ha.) = 2.471 acres, 1 metric ton = 2,204.622 pounds, 36.7437 bushels of wheat or soybeans, 39.3679 bushels of corn or sorghum, 45.9296 bushels of barley, 68.8944 bushels of oats, 22.046 cwt of rice, and 4.59 480-pound bales of cotton. 3. Includes diversion, acreage reduction, 50-92, & 0-92 programs. 0/92 & 50/92 set-aside includes idled acreage and acreage planted to minor oilseeds, sesame, and crambe. 4. Includes imports. 5. Marketing-year weighted average price received by farmers. Does not include an allowance for loans outstanding and government purchases. 6. Residual included in domestic use. 7. Includes seed. 8. Simple average of 48 percent, Decatur. 9. Upland and extra-long staple. Stocks estimates based on Census Bureau data, resulting in an unaccounted difference between supply and use estimates and changes in ending stocks. *Information contacts: Wheat, rice, feed grains, Jenny Gonzales (202) 694-5296; soybeans, soybean products, and cotton, Mae Dean Johnson (202) 694-5299*

Table 18—Cash Prices, Selected U.S. Commodities

	Marketing year[1]			1997	1998					
	1995/96	1996/97	1997/98	Sep	Apr	May	Jun	Jul	Aug	Sep
Wheat, no. 1 HRW, Kansas City ($/bu.)[2]	5.49	4.88	3.71	3.86	3.39	3.41	3.16	3.02	2.74	2.81
Wheat, DNS, Minneapolis ($/bu.)[3]	5.72	4.96	4.31	4.36	4.29	4.24	4.01	3.89	3.58	3.53
Rice, S.W. La. ($/cwt)[4]	18.90	20.34	18.92	19.40	18.38	18.31	18.50	18.50	18.35	17.50
Corn, no. 2 yellow, 30-day, Chicago ($/bu.)[5]	3.97	2.84	2.56	2.66	2.53	2.50	2.44	2.27	1.97	1.84
Sorghum, no. 2 yellow, Kansas City ($/cwt)[5]	6.66	4.54	4.11	4.13	4.10	4.09	4.03	3.74	3.27	2.98
Barley, feed, Duluth ($/bu.)	2.67	2.32	1.90	2.29	1.42	--	--	1.23	--	--
Barley, malting Minneapolis ($/bu.)	3.69	3.18	2.50	2.74	--	--	--	--	2.30	--
U.S. cotton price, SLM, 1-1/16 in. (¢/lb.)[6]	83.00	71.60	67.79	70.75	61.88	65.21	73.50	74.18	71.87	71.75
Northern Europe prices cotton index (¢/lb.)[7]	85.60	78.66	72.11	79.53	65.08	64.61	68.06	69.36	68.13	66.16
U.S. M 1-3/32 in. (¢/lb.)[8]	94.70	82.86	77.98	82.50	71.75	73.06	80.63	81.35	76.94	77.75
Soybeans, no. 1 yellow, 30-day Chicago ($/bu)	6.72	7.38	6.51	6.49	6.43	6.42	6.31	6.26	5.31	5.01
Soybean oil, crude, Decatur (¢/lb.)	24.75	22.50	24.69	22.88	28.10	28.27	25.83	24.88	23.99	25.13
Soybean meal, 48% protein, Decatur ($/ton)	236.00	270.90	276.78	278.30	162.50	160.00	168.60	183.40	146.25	135.80

-- = No quotes. 1. Beginning June 1 for wheat and barley; Aug. 1 for rice and cotton; September 1 for corn, sorghum, and soybeans; October 1 for soymeal and oil. 2. Ordinary protein. 3. 14 percent protein. 4. Long grain, milled basis. 5. Marketing year 1997/98 data are preliminary. 6. Average spot market. 7. Liverpool Cotlook "A" Index; average of 5 lowest prices of 13 selected growths. 8. Cotton, Memphis territory growths. *Information contacts: Wheat, rice, and feed, Jenny Gonzales (202) 694-5296; soybeans, soybean products, and cotton, Mae Dean Johnson (202) 694-5299*

Table 19—Farm Programs, Price Supports, Participation, & Payment Rates

	Target price	Basic loan rate	Findley or announced loan rate[1]	Total deficiency payment rate	Effective base acres[2]	Program[3]	Flexibility contract payment rate	Acres under contract	Contract payment yields	Participation rate[4]
		$/bu.			Mil. acres	Percent of base	$/bu.	Mil. acres	Bu./cwt	Percent
Wheat										
1994/95	4.00	2.72	2.58	0.61	78.10	0/0/0	--	--	--	87
1995/96	4.00	2.69	2.58	0.00	77.70	0/0/0	--	--	--	85
1996/97	--	--	2.58	--	--	--	0.874	76.7	34.70	99
1997/98	--	--	2.58	--	--	--	0.631	76.7	34.70	--
1998/99[5]	--	--	2.58	--	--	--	0.663	78.9	34.50	--
		$/cwt					$/cwt			
Rice										
1994/95	10.71	6.50	5.88 [6]	3.79	4.20	0/0/0	--	--	--	95
1995/96	10.71	6.50	6.50 [6]	3.22 [7]	4.20	5/0/0	--	--	--	95
1996/97	--	6.50	--	--	--	--	2.766	4.2	48.27	99
1997/98	--	6.50	--	--	--	--	2.710	4.2	48.17	--
1998/99[5]	--	6.50	--	--	--	--	2.921	4.2	48.17	--
		$/bu.					$/bu.			
Corn										
1994/95	2.75	1.99	1.89	0.57	81.50	0/0/0	--	--	--	81
1995/96	2.75	1.94	1.89	0.00	81.80	7.5/0/0	--	--	--	82
1996/97	--	--	1.89	--	--	--	0.251	80.7	102.90	98
1997/98	--	--	1.89	--	--	--	0.486	80.9	102.80	--
1998/99[5]	--	--	1.89	--	--	--	0.377	82.0	102.60	--
		$/bu.					$/bu.			
Sorghum										
1994/95	2.61	1.89	1.80	0.59	13.50	0/0/0	--	--	--	81
1995/96	2.61	1.84	1.80	0.00	13.30	0/0/0	--	--	--	77
1996/97	--	--	1.81	--	--	--	0.323	13.1	57.30	99
1997/98	--	--	1.76	--	--	--	0.544	13.1	57.30	--
1998/99[5]	--	--	1.74	--	--	--	0.452	13.6	56.90	--
		$/bu.					$/bu.			
Barley										
1994/95	2.36	1.62	1.54	0.52	10.70	0/0/0	--	--	--	84
1995/96	2.36	1.58	1.54	0.00	10.70	0/0/0	--	--	--	82
1996/97	--	--	1.55	--	--	--	0.332	10.5	47.30	99
1997/98	--	--	1.57	--	--	--	0.277	10.5	47.20	--
1998/99[5]	--	--	1.56	--	--	--	0.284	11.2	46.70	--
		$/bu.					$/bu.			
Oats										
1994/95	1.45	1.02	0.97	0.19	6.80	0/0/0	--	--	--	40
1995/96	1.45	1.00	0.97	0.00	6.50	0/0/0	--	--	--	44
1996/97	--	--	1.03	--	--	--	0.033	6.2	50.80	97
1997/98	--	--	1.11	--	--	--	0.031	6.2	50.80	--
1998/99[5]	--	--	1.11	--	--	--	0.031	6.5	50.70	--
		$/bu.					$/bu.			
Soybeans[8]										
1994/95	--	--	4.92	--	--	--	--	--	--	--
1995/96	--	--	4.92	--	--	--	--	--	--	--
1996/97	--	--	4.97	--	--	--	--	--	--	--
1997/98	--	--	5.26	--	--	--	--	--	--	--
1998/99	--	--	5.26	--	--	--	--	--	--	--
		¢/lb.					¢/lb.			
Upland cotton										
1994/95	72.90	50.00	50.00 [9]	4.60	15.30	11/0/0	--	--	--	89
1995/96	72.90	51.92	51.92 [9]	0.00 [7]	15.50	0/0/0	--	--	--	79
1996/97	--	51.92	--	--	--	--	8.882	16.2	610.00	99
1997/98	--	51.92	--	--	--	--	7.625	16.2	608.00	--
1998/99[5]	--	51.92	--	--	--	--	8.173	16.4	604.00	--

-- = Not available. 1. There are no Findley loan rates for rice or cotton. See footnotes 5 and 7. 2. Prior to 1996, national effective crop acreage base as determined by FSA. Net of CRP. 3. Program requirements for participating producers (mandatory acreage reduction program/mandatory paid land diversion/optional paid land diversion). Acres idled must be devoted to a conserving use to receive program benefits. 4. Percentage of effective base enrolled in acreage reduction programs. Starting in 1996, participation rate is the percent of eligible acres that entered production flexibility contracts. 5. Estimated payment rates and acres under contract. 6. A marketing loan has been in effect for rice since 1985/86. Loans may be repaid at the lower of: a) the loan rate or b) the adjusted world market price(announced weekly). Loans cannot be repaid at less than a specified fraction of the loan rate. Data refer to marketing-year average loan repayment rates. Beginning with the 1996 crop, loans are repaid at the lower of the loan rate plus accumulated interest or the adjusted world price. 7. Guaranteed payment rates for producers in the 50/85/92 program were $0.034/lb. for upland cotton and $4.21/cwt. for rice. 8. There are no target prices, base acres, acreage reduction programs or deficiency payment rates for soybeans. 9. A marketing loan has been in effect for cotton since 1986/87. In 1987/88 and after, loans may be repaid at the lower of: a) the loan rate or b) the adjusted world market price (announced weekly; Plan B). Starting in 1991/92, loans cannot be repaid at less than 70 percent of the loan rate. Data refer to annual average loan repayment rates. Beginning with the 1996 crop, loans are repaid at the lower of the loan rate plus accumulated interest or the adjusted world price. Note: The 1996 Act replaced target prices and deficiency payments with fixed annual payments to producers. *Information contact: Brenda Chewning, Farm Service Agency (202) 720-8838*

Table 20—Fruit

	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
Citrus[1]										
Production (1,000 tons)	13,186	10,860	11,285	12,452	15,274	14,561	15,799	15,712	17,247	18,029
Per capita consumpt. (lb.)[2]	23.6	21.4	19.1	24.4	26.0	25.0	24.1	25.0	26.8	--
Noncitrus[3]										
Production (1,000 tons)	16,345	15,640	15,740	17,124	16,563	17,341	16,358	16,114	18,390	--
Per capita consumpt. (lb.)[2]	72.3	70.7	70.6	74.5	73.1	75.6	73.7	74.0	76.0	--

	1997	1998								
	Oct	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
Grower prices										
Apples (¢/pound)[4]	25.3	21.6	21.3	19.2	18.2	16.3	16.1	19.0	22.7	22.8
Pears (¢/pound)[4]	18.05	13.00	12.15	14.60	18.65	17.65	20.25	22.85	21.00	23.95
Oranges ($/box)[5]	3.90	3.73	5.14	5.79	5.86	6.70	6.71	5.37	4.97	5.42
Grapefruit ($/box)[5]	4.15	1.61	1.03	1.36	0.42	3.58	3.66	6.01	11.09	3.88
Stocks, ending										
Fresh apples (mil. lb.)	5,701	2,841	2,277	1,626	1,113	637	322	133	3,437	--
Fresh pears (mil. lb.)	585	212	125	61	32	4	0	94	534	--
Frozen fruits (mil. lb.)	1,440	1,009	882	808	764	836	1,040	1,032	1,044	--
Frozen conc.orange juice (mil. single-strength gallons)	466	828	826	1,010	1,066	999	914	827	733	--

-- = Not available. 1. Year shown is when harvest concluded. 2. Fresh per capita consumption. 3. Calendar year. 4. Fresh use. 5. U.S. equivalent on-tree returns. *Information contact: Susan Pollack (202) 694-5251*

Table 21—Vegetables

	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
Production[1]										
Total vegetables (1,000 cwt)	543,435	562,938	565,754	677,975	675,793	762,934	742,595	759,347	752,266	--
Fresh (1,000 cwt)[2 4]	254,418	254,039	242,733	393,249	377,698	396,671	391,699	408,823	428,171	--
Processed (tons)[3 4]	14,450,860	15,444,970	16,151,030	14,236,320	14,904,750	18,313,150	17,544,780	17,526,190	16,204,740	--
Mushrooms (1,000 lbs)[5]	714,992	749,151	746,832	776,357	750,799	782,340	777,870	776,677	808,602	--
Potatoes (1,000 cwt)	370,444	402,110	417,622	425,367	428,693	467,054	443,606	498,633	465,537	--
Sweetpotatoes (1,000 cwt)	11,358	12,594	11,203	12,005	11,053	13,395	12,906	13,456	13,512	--
Dry edible beans (1,000 cwt)	23,729	32,379	33,765	22,615	21,913	29,028	30,812	27,960	29,156	31,070

	1997	1998								
	Oct	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
Shipments (1,000 cwt)										
Fresh	18,514	18,723	20,292	28,362	28,082	29,181	26,104	18,422	18,851	15,727
Iceberg lettuce	3,129	3,233	3,094	4,125	3,628	3,377	4,021	3,099	3,900	3,049
Tomatoes, all	3,250	3,057	3,647	4,767	3,540	3,031	2,858	2,667	2,927	2,568
Dry-bulb onions	4,031	3,436	2,753	4,009	3,584	3,006	3,255	3,278	3,783	3,049
Others[6]	8,104	8,997	10,798	15,461	17,330	19,767	15,970	9,378	8,241	7,061
Potatoes, all	12,577	11,870	15,619	23,416	14,554	11,965	12,734	9,569	12,695	11,498
Sweetpotatoes	805	180	252	373	213	147	140	96	289	326

-- = Not available. 1. Calendar year except mushrooms. 2. Includes fresh production of asparagus, broccoli, carrots, cauliflower, celery, sweet corn, lettuce, honeydews, onions, & tomatoes through 1991. 3. Includes processing production of snap beans, sweet corn, green peas, tomatoes, cucumbers (for pickles), asparagus, broccoli, carrots, and cauliflower. 4. Data after 1991 not comparable to previous years because commodity estimates reinstated in 1992 are included. 5. Fresh and processing agaricus mushrooms only. Excludes specialty varieties. Crop year July 1- June 30. 6. Includes snap beans, broccoli, cabbage, cauliflower, celery, sweet corn, cucumbers, eggplant, bell peppers, honeydews, and watermelons. *Information contact: Gary Lucier (202) 694-5253*

Table 22—Other Commodities

	Annual			1997				1998		
	1995	1996	1997	I	II	III	IV	I	II	III
Sugar										
Production[1]	7,978	7,268	7,418	2,075	679	576	4,088	2,376	824	733
Deliveries[1]	9,451	9,633	9,764	2,215	2,430	2,642	2,469	2,261	2,465	2,616
Stocks, ending[1]	2,908	3,195	3,376	3,901	2,734	1,487	3,195	3,917	2,881	1,675
Coffee										
Composite green price[2] N.Y. (¢/lb.)	142.18	109.35	146.49	134.80	172.99	143.29	134.89	143.58	117.73	98.57

	Annual			1997			1998			
	1995	1996	1997	Oct	May	Jun	Jul	Aug	Sep	Oct
Tobacco										
Avg. price to grower[3]										
Flue-cured ($/lb.)	1.79	1.83	1.73	1.79	0	0	1.63	1.62	1.79	1.87
Burley ($/lb.)	1.85	1.92	1.86							
Domestic taxable removals										
Cigarettes (bil.)	490.3	486.0	471.4	30.1	39.9	42.6	0	0	0	0
Large cigars (mil.)[4]	2,561.7	3,166.4	3,552.9	323.4	322.9	338.0	0	0	0	0

-- = Not available. 1. 1,000 short tons, raw value. Quarterly data shown at end of each quarter. 2. Net imports of green and processed coffee. 3. Crop year July-June for flue-cured, October-September for burley. 4. Includes imports of large cigars. *Information contacts: sugar, Fannye Jolly (202) 694-5249; tobacco, Tom Capehart (202) 694-5245*

World Agriculture

Table 23—World Supply & Utilization of Major Crops, Livestock & Products

	1989/90	1990/91	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997/98	1998/99 F
					Million units					
Wheat										
Area (hectares)	225.8	231.4	222.5	223.1	222.4	215.5	219.8	231.3	229.9	225.6
Production (metric tons)	533.2	588.0	542.9	562.2	559.4	525.2	538.1	583.3	611.7	590.6
Exports (metric tons[1]	103.7	101.1	111.1	112.7	101.1	100.0	98.0	100.1	100.1	97.9
Consumption (metric tons)[2]	532.7	561.9	555.5	550.2	562.3	548.1	550.8	577.9	588.0	601.8
Ending stocks (metric tons)[3]	118.9	145.1	132.5	144.5	141.5	118.6	105.9	111.3	135.0	123.8
Coarse grains										
Area (hectares)	321.9	316.3	321.9	323.8	317.5	323.2	313.6	322.8	314.6	310.7
Production (metric tons)	793.7	828.7	810.5	871.9	799.5	873.2	802.0	908.2	888.6	882.9
Exports (metric tons[1]	104.7	89.1	95.6	91.9	85.3	98.0	87.9	93.3	86.9	86.5
Consumption (metric tons)[2]	817.7	817.1	809.7	843.8	839.2	860.8	840.3	879.1	880.7	880.4
Ending stocks (metric tons)[3]	123.2	134.8	135.6	163.6	123.8	136.2	97.9	126.9	134.8	137.3
Rice, milled										
Area (hectares)	146.5	146.6	147.4	146.7	145.5	147.9	148.1	149.8	148.2	149.0
Production (metric tons)	343.9	352.0	354.7	355.8	355.6	364.8	371.2	380.2	385.4	376.3
Exports (metric tons[1]	11.7	12.1	14.1	14.9	16.4	21.0	19.5	18.9	24.9	20.4
Consumption (metric tons)[2]	338.2	347.4	356.4	357.9	358.7	366.9	371.2	379.1	384.4	385.1
Ending stocks (metric tons)[3]	54.5	59.1	57.5	55.3	52.2	50.1	50.1	51.2	52.2	43.4
Total grains										
Area (hectares)	694.2	694.3	691.8	693.6	685.4	686.6	681.5	703.9	692.7	685.3
Production (metric tons)	1,670.8	1,768.7	1,708.1	1,789.9	1,714.5	1,763.2	1,711.3	1,871.7	1,885.7	1849.8
Exports (metric tons[1]	220.1	202.3	220.8	219.5	202.8	219.0	205.4	212.3	211.9	204.8
Consumption (metric tons)[2]	1,688.6	1,726.4	1,721.6	1,751.9	1,760.2	1,775.8	1,762.3	1,836.1	1,853.1	1867.3
Ending stocks (metric tons)[3]	296.6	339.0	325.6	363.4	317.5	304.9	253.9	289.4	322.0	304.5
Oilseeds										
Crush (metric tons)	171.7	176.7	185.1	184.4	190.1	208.1	217.5	219.1	229.6	235.5
Production (metric tons)	212.4	215.7	224.3	227.5	229.4	261.8	258.5	261.2	287.1	290.8
Exports (metric tons)	35.6	33.4	37.6	38.2	38.7	44.1	44.3	49.4	53.3	52.6
Ending stocks (metric tons)	23.7	23.4	21.9	23.6	20.3	27.2	22.1	16.4	22.2	26.2
Meals										
Production (metric tons)	116.8	119.3	125.2	125.2	131.7	142.1	147.4	149.3	156.1	160.6
Exports (metric tons)	39.8	40.7	42.2	40.8	44.9	46.7	49.7	50.3	51.4	54.2
Oils										
Production (metric tons)	57.1	58.1	60.6	61.1	63.7	69.6	73.2	75.5	76.8	79.8
Exports (metric tons)	20.4	20.5	21.3	21.3	24.3	27.1	26.0	28.8	29.3	29.9
Cotton										
Area (hectares)	31.6	33.2	34.8	32.6	30.7	32.2	35.9	33.8	33.5	32.7
Production (bales)	79.7	87.1	95.7	82.5	76.7	85.6	93.0	89.4	91.1	84.8
Exports (bales)	31.3	29.8	28.2	25.6	26.7	28.4	27.8	26.9	26.3	25.2
Consumption (bales)	86.9	85.6	86.0	85.8	85.5	85.6	87.1	88.2	88.4	86.6
Ending stocks (bales)	24.8	26.9	37.0	34.4	26.3	28.3	33.8	37.0	40.5	38.5
	1990	1991	1992	1993	1994	1995	1996	1997	1998 F	1999 F
Red meat[4,5]										
Production (metric tons)	112.3	117.7	117.3	119.3	124.6	130.2	135.5	137.4	133.2	--
Consumption (metric tons)	110.9	116.1	115.7	118.3	123.5	128.7	132.8	135.1	130.1	--
Exports (metric tons)[1]	8.2	7.5	7.4	7.4	8.1	8.2	8.5	8.6	7.6	--
Poultry[4]										
Production (metric tons)	33.1	39.6	38.0	40.5	43.9	47.7	50.5	52.7	53.7	55.6
Consumption (metric tons)	32.6	38.4	37.0	39.4	42.5	46.2	48.8	50.8	51.8	53.7
Exports (metric tons)[1]	1.7	2.8	2.4	2.8	3.7	4.6	5.3	5.7	5.5	5.5
Dairy										
Milk production (metric tons)[5]	387.4	377.6	378.4	377.6	378.4	380.8	379.8	381.2	384.3	--

F = forecast. 1. Excludes intra-EU trade but includes intra-FSU trade. 2. Where stocks data are not available, consumption includes changes.

3. Stocks data are based on differing marketing years and do not represent levels at a given date. Data not available for all countries.

4. Calendar year data. 1990 data correspond with 1989/90, etc. 5. Beef and pork only in 1998 and 1999. 6. Data prior to 1989 no longer comparable.

Information contacts: Crops, Ed Allen (202) 694-5288; red meat and poultry, Leland Southard (202) 694-5187; dairy, LaVerne Williams (202) 694-5190

U.S. Agricultural Trade

Table 24—Prices of Principal U.S. Agricultural Trade Products

	Annual			1997	1998					
	1995	1996	1997	Sep	Apr	May	Jun	Jul	Aug	Sep
Export commodities										
Wheat, f.o.b. vessel, Gulf ports ($/bu.)	4.82	5.63	4.35	4.08	3.55	3.50	3.28	3.21	2.96	2.94
Corn, f.o.b. vessel, Gulf ports ($/bu.)	3.13	4.17	2.98	2.89	2.72	2.70	2.65	2.56	2.25	2.19
Grain sorghum, f.o.b. vessel, Gulf ports ($/bu.)	3.13	3.90	2.89	2.72	2.68	2.63	2.56	2.51	2.34	2.16
Soybeans, f.o.b. vessel, Gulf ports ($/bu.)	6.50	7.88	7.94	7.41	6.68	6.66	6.59	6.57	5.83	5.62
Soybean oil, Decatur (¢/lb.)	26.75	23.75	23.33	22.88	28.10	28.28	25.83	24.88	24.00	25.14
Soybean meal, Decatur, ($/ton)	173.70	246.67	266.70	278.29	162.51	160.03	168.55	183.45	146.15	135.83
Cotton, 7-market avg. spot (¢/lb.)	93.45	77.93	69.62	70.75	61.88	65.21	73.50	74.18	71.87	71.77
Tobacco, avg. price at auction (¢/lb.)	178.79	183.20	182.74	175.49	169.05	---	---	162.96	159.51	176.99
Rice, f.o.b., mill, Houston ($/cwt)	16.68	19.64	20.88	20.55	19.00	19.00	19.00	19.00	18.85	18.75
Inedible tallow, Chicago (¢/lb.)	19.22	20.13	20.75	20.88	17.38	20.35	19.63	17.31	17.57	16.69
Import commodities										
Coffee, N.Y. spot ($/lb.)	1.45	1.29	2.05	2.12	1.57	1.43	1.30	1.20	1.28	1.13
Rubber, N.Y. spot (¢/lb.)	82.52	72.88	55.40	51.89	41.27	42.65	41.26	40.03	38.58	68.66
Cocoa beans, N.Y. ($/lb.)	0.61	0.62	0.69	0.77	0.75	0.78	0.74	0.73	0.72	0.72

Information contact: Mary Teymourian (202) 694-5173 or maryt@econ.ag.gov

Table 25—Trade Balance

	Calendar Year			1997	1998					
	1997	1997 FY	1998 FY	Sep	Apr	May	Jun	Jul	Aug	Sep
					$ million					
Exports										
Agricultural	57,245	57,365	53,730	4,489	4,733	4,249	3,928	3,971	3,884	3,467
Nonagricultural	585,977	569,892	584,077	49,253	48,859	48,774	49,191	44,054	45,692	48,056
Total [1]	643,222	627,257	637,807	53,742	53,108	52,702	53,162	47,938	49,396	51,523
Imports										
Agricultural	36,289	35,798	37,014	2,900	3,328	2,981	3,099	2,908	2,857	2,921
Nonagricultural	828,412	829,548	859,730	73,215	72,059	70,193	73,577	72,818	72,688	74,752
Total[2]	864,701	865,346	896,744	76,115	75,387	73,174	76,676	75,726	75,545	77,673
Trade Balance										
Agricultural	20,956	21,567	16,716	1,589	921	947	872	976	847	546
Nonagricultural	-242,435	-259,656	-275,653	-23,962	-23,200	-21,419	-24,386	-28,764	-26,996	-26,696
Total	-221,479	-238,089	-258,937	-22,373	-22,279	-20,472	-23,514	-27,788	-26,149	-26,150

FY = Fiscal years 1997 and 1998. -- = Not available. Fiscal year (Oct. 1-Sep. 30). 1. Domestic exports including Department of Defense shipments (F.A.S. Value). 2. Imports for consumption (customs value). *Information contact: Mary Fant (202) 694-5272*

Table 26—Indexes of Real Trade-Weighted Dollar Exchange Rates[1]

	Annual			1997	1998					
	1995	1996	1997	Sep	Apr	May	Jun	Jul	Aug	Sep
					1990=100					
Total U.S. trade	96.2	100.8	111.9	114.2	116.6	115.6	117.3	118.1	118.8	113.5
Agricultural trade										
U.S. markets	97.3	101.0	109.6	106.7	114.4	115.2	117.7	117.6	119.7	119.5
U.S. competitors	97.4	98.7	109.1	111.2	114.9	114.2	116.2	116.3	116.3	112.6
High-valued products										
U.S. markets	95.2	100.4	108.2	104.5	110.2	111.3	114.0	114.5	117.3	115.1
U.S. competitors	98.3	100.1	110.9	114.0	116.5	115.0	116.5	116.7	116.9	112.7
Corn										
U.S. markets	89.1	96.4	107.1	102.4	112.9	114.5	117.9	118.1	120.5	117.3
U.S. competitors	88.8	90.1	97.4	99.3	101.4	100.7	101.4	102.1	102.0	99.3
Soybeans										
U.S. markets	91.1	96.0	107.9	105.6	114.3	114.6	117.6	117.1	118.2	115.3
U.S. competitors	81.3	80.8	82.2	82.5	85.1	85.0	85.1	85.2	85.4	85.3
Wheat										
U.S. markets	100.4	100.7	105.4	104.5	111.5	112.1	113.3	113.1	114.1	116.1
U.S. competitors	100.8	102.1	109.8	112.1	115.3	115.4	117.1	117.5	119.4	116.5
Vegetables										
U.S. markets	102.2	105.6	112.4	109.5	115.3	116.5	118.9	119.7	122.9	121.2
U.S. competitors	99.1	100.5	112.0	113.8	116.1	114.4	115.9	116.0	116.0	112.0
Red meats										
U.S. markets	84.8	93.3	100.4	98.8	108.0	109.7	113.5	113.7	116.9	113.4
U.S. competitors	96.3	98.0	107.9	110.7	114.1	113.2	114.9	114.9	115.6	111.9
Fruits & fruit juices										
U.S. markets	96.2	101.3	111.3	106.8	112.5	113.6	116.1	117.0	119.7	116.8
U.S. competitors	98.2	98.2	107.2	109.9	113.0	111.6	113.2	113.9	114.2	110.9
Cotton										
U.S. markets	93.6	95.5	105.7	103.4	122.0	124.9	130.3	127.9	126.8	126.3
U.S. competitors	104.6	101.6	103.0	103.6	106.8	106.5	107.7	107.7	108.3	108.7
Poultry										
U.S. markets	107.3	102.8	111.9	101.8	104.0	104.5	106.2	106.4	107.3	122.4
U.S. competitors	93.9	95.7	107.3	109.9	111.1	109.7	111.3	111.4	111.5	107.8

P = preliminary. 1. Real indexes adjust nominal exchange rates to avoid the distortion caused by different levels of inflation among countries. A higher value means the dollar has appreciated. "Total U.S. Trade" Index uses the Federal Reserve Board Index of trade-weighted value of the U.S. dollar against 10 major countries. Weights are based on relative importance of major U.S. customers and competitors in world markets. Indexes are subject to revision for up to one year due to delayed reporting by some countries. High-value products conform to FASís definition for consumer-oriented agricultural products.
Data are available at http://mann77.mannlib.cornell.edu/data-sets/international/88021/. *Information contact: Tim Baxter (202) 694-5318 or Andy Jerardo (202) 694-5323*

Note: The above indices have been recently revised to reflect a rebasing of the Russian Ruble and to correct errors in the CPI data for Hong Kong and Taiwan. The complete corrected series is available at the above URL.

Table 27—U.S. Agricultural Exports & Imports

	Calendar Year			Sept		Calendar Year			Sept	
	1997	1997 FY	1998 FY	1997	1998	1997	1997 FY	1998 FY	1997	1998
	1,000 units					*$ million*				
EXPORTS										
Animals, live (no.)[1]	1,802	1,336	1,563	176	46	566	508	538	45	19
Meats and preps., excl. poultry (mt)	1,924	1,823	2,064	184	159	4,597	4,438	4,507	397	336
Dairy products (mt)	126	102	142	11	14	932	869	925	80	79
Poultry meats (mt)	2,585	2,553	2,663	228	147	2,423	2,516	2,347	209	140
Fats, oils, and greases (mt)	1,089	1,056	1,365	99	124	562	543	655	48	55
Hides and skins, incl. furskins	--	--	--	--	--	1,651	1,693	1,358	115	88
Cattle hides, whole (no.)[1]	20,113	20,761	18,992	1,522	1,469	1,187	1,232	969	85	71
Mink pelts (no.)[1]	3,763	3,600	2,990	136	75	97	96	83	5	2
Grains and feeds (mt)	91,120	95,091	87,289	8,813	7,315	15,368	16,368	13,961	1,407	1,027
Wheat (mt)	25,264	24,526	25,791	3,194	2,456	4,095	4,117	3,759	503	301
Wheat flour (mt)	508	511	465	62	58	138	141	117	13	11
Rice (mt)	2,508	2,560	3,310	140	200	932	959	1,132	49	70
Feed grains, incl. products (mt)	49,091	53,796	44,564	4,403	3,623	6,219	7,166	5,187	521	352
Feeds and fodders (mt)	12,352	12,295	11,704	901	858	2,669	2,688	2,421	211	179
Other grain products (mt)	1,397	1,404	1,455	113	120	1,316	1,295	1,345	110	115
Fruits, nuts, and preps. (mt)	3,896	3,830	3,633	296	257	4,235	4,261	3,977	441	313
Fruit juices, incl. froz. (1,000 hectoliters)[1]	10,689	10,455	10,658	791	869	662	658	653	48	55
Vegetables and preps. (mt)	3,343	3,294	3,457	208	232	4,144	4,081	4,168	309	295
Tobacco, unmanufactured (mt)	222	238	208	11	10	1,553	1,612	1,448	94	77
Cotton, excl. linters (mt)	1,568	1,566	1,552	65	61	2,682	2,711	2,517	111	97
Seeds (mt)	1,098	1,200	816	71	25	884	913	827	70	45
Sugar, cane or beat (mt)[1]	125	139	123	12	11	54	60	48	5	4
Oilseeds and products (mt)	36,665	33,808	35,966	1,752	1,369	12,057	11,288	10,948	688	439
Oilseeds (mt)	26,764	24,735	24,251	1,212	879	8,326	7,875	6,818	469	240
Soybeans (mt)	26,023	24,027	23,287	1,159	758	7,379	6,950	6,117	335	169
Protein meal (mt)	7,311	6,671	8,666	359	296	1,966	1,795	1,975	90	51
Vegetable oils (mt)	2,590	2,402	3,049	181	193	1,766	1,618	2,191	130	148
Essential oils (mt)	45	46	46	3	4	588	619	533	50	44
Other	361	362	329	34	30	4,287	4,228	4,284	370	353
Total	144,166	145,109	139,653	11,786	9,757	57,245	57,365	53,730	4,489	3,467
IMPORTS										
Animals, live (no.)[1]	5,298	4,989	6,177	424	491	1,594	1,525	1,670	151	149
Meats and preps., excl. poultry (mt)	1,154	1,140	1,230	93	104	2,630	2,583	2,718	215	224
Beef and veal (mt)	797	785	857	62	70	1,609	1,552	1,761	130	144
Pork (mt)	261	260	271	23	26	754	766	686	66	59
Dairy products (mt)	255	265	292	24	26	1,225	1,273	1,368	110	120
Poultry and products[1]	--	--	--	--	--	195	186	207	18	15
Fats, oils, and greases (mt)	80	76	80	7	7	60	58	59	5	5
Hides and skins, incl. furskins (mt)	--	--	--	--	--	206	210	184	12	11
Wool, unmanufactured (mt)	44	38	45	3	2	154	131	151	9	5
Grains and feeds (mt)	7,535	7,639	7,051	624	702	2,963	2,941	2,919	270	264
Fruits, nuts, and preps., excl. juices (mt)	7,252	7,121	7,581	487	473	3,837	3,773	3,982	236	254
Bananas and plantains (mt)	3,998	3,950	4,175	339	330	1,220	1,218	1,214	97	102
Fruit juices (1,000 hectoliters)[1]	27,806	28,829	26,577	1,708	1,822	829	913	669	48	44
Vegetables and preps. (mt)	4,217	4,384	4,987	276	308	3,707	3,604	4,249	238	277
Tobacco, unmanufactured (mt)	294	337	241	32	23	1,089	1,179	822	112	65
Cotton, unmanufactured (mt)	17	27	10	1	1	20	34	11	1	0
Seeds (mt)	224	223	254	12	10	371	357	419	23	23
Nursery stock and cut flowers[1]	--	--	--	--	--	1,004	974	1,082	88	87
Sugar, cane or beet (mt)	2,975	2,938	2,170	445	329	984	1,013	758	138	122
Oilseeds and products (mt)	3,963	3,780	4,314	306	381	2,242	2,248	2,243	163	200
Oilseeds (mt)	1,035	985	1,028	48	54	384	374	371	17	18
Protein meal (mt)	1,048	967	1,277	98	113	188	181	188	17	15
Vegetable oils (mt)	1,880	1,828	2,010	160	214	1,670	1,693	1,684	128	168
Beverages, excl. fruit juices (1,000 hectoliters)[1]	21,203	20,426	22,959	1,793	2,066	3,385	3,247	3,705	287	320
Coffee, tea, cocoa, spices (mt)	2,265	2,305	2,374	163	188	6,048	5,778	6,066	461	423
Coffee, incl. products (mt)	1,180	1,212	1,155	73	88	3,886	3,698	3,587	267	214
Cocoa beans and products (mt)	767	767	875	64	72	1,471	1,414	1,701	133	143
Rubber and allied gums (mt)	1,068	1,075	1,162	90	126	1,229	1,315	1,027	97	92
Other	--	--	--	--	--	2,528	2,458	2,703	219	221
Total	--	--	--	--	--	36,300	35,798	37,014	2,900	2,921

FY = Fiscal years 1997 and 1998. -- = Not available. Fiscal years (October 1 through Septermber 30). 1997 data are from Foreign Agricultural Trade *of the U.S*. 1. Not included in total volume. NOTE: Totals include transshipments through Canada, but transshipments are not distributed by commodity as previously. NOTE: Adjusted transshipments through Canada for 1997 exports. *Information Contact: Mary Fant (202) 694-5272*

Table 28—U.S. Agricultural Exports by Region

Region & country	Calendar year 1996	Calendar year 1997	1998FY	1997 Sep	1998 Apr	1998 May	1998 Jun	1998 Jul	1998 Aug	1998 Sep
					$ million					
WESTERN EUROPE	9,702	9,728	8,844	791	601	547	517	459	456	479
European Union[1]	9,322	9,105	8,508	681	577	525	501	435	439	451
Belgium-Luxembourg	749	678	666	70	41	51	43	38	34	58
France	524	570	538	35	25	30	25	25	25	21
Germany	1,489	1,355	1,294	130	96	92	87	72	80	76
Italy	796	764	722	42	44	43	40	21	26	32
Netherlands	2,218	2,040	1,792	143	97	83	84	79	60	79
United Kingdom	1,233	1,312	1,300	115	103	103	89	102	95	86
Portugal	291	254	185	8	9	9	35	5	8	7
Spain, incl. Canary Islands	1,124	1,157	1,126	64	83	47	48	38	55	47
Other Western Europe	380	624	336	110	25	23	16	24	17	28
Switzerland	211	517	236	99	17	14	9	17	9	17
EASTERN EUROPE	439	284	320	16	21	22	31	26	16	11
Poland	232	121	139	10	8	9	18	12	5	3
Former Yugoslavia	88	96	97	2	7	4	6	6	6	3
Romania	57	18	31	2	2	4	4	2	3	1
NEWLY INDEPENDENT STATES	1,747	1,483	1,456	133	114	144	124	141	109	34
Russia	1,328	1,204	1,103	103	95	112	93	97	70	6
ASIA[2]	28,560	25,705	21,954	1,880	1,829	1,588	1,567	1,493	1,523	1,301
West Asia (Mideast)	2,513	2,612	2,285	203	185	161	171	174	164	123
Turkey	637	734	658	39	61	63	60	48	72	34
Iraq	3	82	131	13	8	0	6	30	0	0
Israel, incl. Gaza and W. Bank	617	537	389	27	25	34	19	29	24	13
Saudi Arabia	551	668	535	58	43	33	35	33	32	34
South Asia	653	760	623	93	29	35	33	31	79	37
Bangladesh	88	120	114	3	9	6	6	9	6	11
India	113	155	163	32	11	11	20	7	31	13
Pakistan	352	442	275	58	2	5	6	8	30	6
China	2,092	1,613	1,514	70	102	45	63	57	68	51
Japan	11,704	10,536	9,459	804	898	753	711	681	626	589
Southeast Asia	3,270	2,988	2,282	219	164	147	163	183	181	128
Indonesia	852	772	529	36	28	14	45	50	50	31
Philippines	892	873	744	86	75	66	68	63	73	46
Other East Asia	8,327	7,196	5,790	491	451	446	427	366	405	372
Korea, Rep.	3,871	2,863	2,245	182	207	203	172	161	164	140
Hong Kong	1,490	1,712	1,568	151	131	125	128	105	100	128
Taiwan	2,965	2,616	1,971	158	113	118	127	99	141	104
AFRICA	2,877	2,282	2,167	232	94	104	145	174	185	193
North Africa	1,986	1,569	1,475	171	44	67	73	122	125	119
Morocco	244	167	139	13	2	4	7	20	13	2
Algeria	322	315	281	21	15	13	20	28	25	13
Egypt	1,319	964	939	120	25	43	44	73	84	99
Sub-Sahara	891	713	692	61	51	38	72	51	60	74
Nigeria	190	116	140	14	7	11	19	20	13	12
S. Africa	309	222	193	19	14	7	16	11	15	17
LATIN AMERICA and CARIBBEAN	10,486	10,417	11,348	783	924	842	878	970	822	822
Brazil	588	579	566	29	35	24	36	23	28	39
Caribbean Islands	1,419	1,501	1,487	136	116	104	99	131	114	105
Central America	1,006	1,047	1,137	70	113	97	98	94	81	87
Colombia	631	543	592	34	53	49	67	38	41	38
Mexico	5,447	5,184	5,956	404	484	477	486	546	460	456
Peru	310	193	314	14	33	15	16	33	29	35
Venezuela	483	572	516	32	45	35	29	55	32	24
CANADA	6,146	6,795	7,022	573	611	627	645	577	534	558
OCEANIA	489	550	545	49	42	46	46	38	49	49
TOTAL	60,445	57,245	53,730	4,489	4,249	3,928	3,971	3,884	3,704	3,467
Developed countries	28,890	28,431	--	2,288	2,197	2,014	1,964	1,794	1,707	1,718
Developing countries	27,681	25,687	--	1,995	1,836	1,722	1,820	1,891	1,818	1,662
Other countries	3,873	3,128	--	207	217	191	187	199	179	87

FY = Fical year 1998. -- = Not available. Based on fiscal year beginning October 1 and ending September 30. 1. Austria, Finland, and Sweden are included in the European Union. 2. Asia forecasts exclude West Asia (Mideast). NOTE: Adjusted for transhipments through Canada, but transhipments are not distributed as previously for 1998. *Information contact: Mary Fant (202) 694-5272*

Farm Income

Table 29—Value Added to the U.S. Economy by the Agricultural Sector

		1989	1990	1991	1992	1993	1994	1995	1996	1997	1998 F
						$ billion					
	Final crop output	81.5	83.3	81.0	89.0	82.4	100.3	95.8	115.6	112.5	104.6
	Food grains	8.2	7.5	7.3	8.5	8.2	9.5	10.4	10.7	10.6	8.8
	Feed crops	17.0	18.7	19.3	20.1	20.2	20.4	24.6	27.3	27.6	23.8
	Cotton	5.0	5.5	5.2	5.2	5.2	6.7	6.9	7.0	6.5	5.6
	Oil crops	11.9	12.3	12.7	13.3	13.2	14.7	15.5	16.4	19.9	17.6
	Tobacco	2.4	2.7	2.9	3.0	2.9	2.7	2.5	2.8	2.9	2.9
	Fruits and tree nuts	9.2	9.4	9.9	10.2	10.3	10.3	11.1	11.9	12.8	13.1
	Vegetables	11.6	11.5	11.6	11.9	13.5	13.9	14.9	14.6	15.1	16.0
	All other crops	11.6	12.8	13.1	13.7	14.0	14.9	15.2	15.9	16.7	16.8
	Home consumption	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
	Value of inventory adjustment[1]	4.5	2.8	-1.2	3.2	-5.3	7.2	-5.4	8.9	0.3	-0.1
	Final animal output	83.8	90.2	87.3	87.1	91.7	89.7	87.6	92.2	96.2	92.9
	Meat animals	46.7	51.2	50.1	47.7	50.8	46.8	44.8	44.4	49.9	43.1
	Dairy products	19.4	20.2	18.0	19.7	19.2	19.9	19.9	22.8	21.0	23.9
	Poultry and eggs	15.4	15.3	15.2	15.5	17.3	18.4	19.1	22.3	22.2	22.8
	Miscellaneous livestock	2.5	2.5	2.5	2.6	2.8	3.0	3.2	3.4	3.5	3.5
	Home consumption	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.3	0.4	0.4
	Value of inventory adjustment[1]	-0.7	0.4	1.0	1.0	1.1	1.1	0.2	-1.1	-0.7	-0.9
	Services and forestry	15.8	15.3	15.4	15.2	16.6	17.9	19.4	20.7	22.1	22.6
	Machine hire and customwork	1.7	1.8	1.8	1.8	1.9	2.1	1.9	2.2	2.6	2.5
	Forest products sold	2.0	1.8	1.8	2.2	2.6	2.7	2.9	2.8	2.8	2.9
	Other farm income	4.9	4.5	4.7	4.2	4.6	4.4	5.2	5.9	6.3	6.3
	Gross imputed rental value of farm dwellings	7.2	7.2	7.2	7.0	7.6	8.7	9.3	9.8	10.3	10.9
	Final agricultural sector output[2]	181.0	188.7	183.7	191.3	190.7	207.9	202.8	228.5	230.8	220.1
Minus	Intermediate consumption outlays:	88.7	92.9	94.6	93.5	100.6	104.9	109.0	112.9	118.6	113.6
	Farm origin	38.1	39.5	38.6	38.6	41.2	41.3	41.6	42.7	45.7	43.2
	Feed purchased	20.7	20.4	19.3	20.1	21.4	22.6	23.8	25.2	25.2	23.8
	Livestock and poultry purchased	12.9	14.6	14.1	13.6	14.6	13.3	12.3	11.2	13.8	12.6
	Seed purchased	4.4	4.5	5.1	4.9	5.2	5.4	5.5	6.2	6.7	6.8
	Manufactured inputs	20.6	22.0	23.2	22.7	23.1	24.4	26.2	28.6	29.0	27.8
	Fertilizers and lime	8.2	8.2	8.7	8.3	8.4	9.2	10.0	10.9	10.9	10.5
	Pesticides	5.0	5.4	6.3	6.5	6.7	7.2	7.7	8.5	8.8	8.9
	Petroleum fuel and oils	4.8	5.8	5.6	5.3	5.3	5.3	5.4	6.0	6.2	5.6
	Electricity	2.6	2.6	2.6	2.6	2.7	2.7	3.0	3.2	3.0	2.7
	Other intermediate expenses	30.0	31.4	32.8	32.2	36.2	39.2	41.2	41.5	43.9	42.7
	Repair and maintenance of capital items	8.4	8.6	8.6	8.5	9.2	9.1	9.5	10.3	10.4	10.2
	Machine hire and customwork	3.4	3.6	3.5	3.8	4.4	4.8	4.8	4.7	4.8	4.6
	Marketing, storage, and transportation	4.2	4.2	4.7	4.5	5.6	6.8	7.2	6.9	7.1	6.9
	Contract labor	1.3	1.6	1.6	1.7	1.8	1.8	2.0	2.1	2.6	2.7
	Miscellaneous expenses	12.7	13.5	14.3	13.7	15.2	16.7	17.8	17.5	19.0	18.2
Plus	Net government transactions:	5.1	3.1	2.1	2.7	6.9	1.0	0.1	0.1	0.1	5.5
	+ Direct government payments	10.9	9.3	8.2	9.2	13.4	7.9	7.3	7.3	7.5	12.9
	- Motor vehicle registration and licensing fees	0.3	0.4	0.3	0.4	0.4	0.4	0.5	0.4	0.5	0.5
	- Property taxes	5.5	5.9	5.8	6.1	6.2	6.5	6.7	6.8	7.0	7.0
	Gross value added	97.4	98.9	91.2	100.5	97.0	104.0	93.9	115.7	112.3	112.0
Minus	Capital consumption	18.1	18.1	18.2	18.3	18.4	18.7	19.1	19.4	19.5	19.6
	Net value added[2]	79.3	80.7	73.0	82.1	78.6	85.3	74.8	96.3	92.8	92.3
Minus	Factor payments:	34.0	36.0	34.4	34.6	35.1	37.0	38.8	42.9	42.9	44.4
	Employee compensation (total hired labor)	10.7	12.5	12.3	12.3	13.2	13.5	14.3	15.4	16.0	16.9
	Net rent received by nonoperator landlords	9.4	10.0	9.9	11.2	11.0	11.8	11.8	14.3	13.2	13.4
	Real estate and non-real estate interest	13.9	13.4	12.1	11.1	10.8	11.7	12.7	13.2	13.7	14.1
	Net farm income[2]	45.3	44.7	38.6	47.5	43.6	48.3	36.0	53.4	49.8	48.0

Values in last two columns are preliminary or forecast. 1. A positive value of inventory change represents current-year production not sold by December 1. A negative value is an offset to production from prior years included in current-year sales. 2. Final sector output is the gross value of commodities and services produced within a year. Net value added is the sectorís contribution to the National economy and is the sum of income from production earned by all factors of production. Net farm income is the farm operatorsí share of income from the sectorís production activities. The concept presented is consistent with that employed by the Organization for Economic Cooperation and Development. *Information contact: Roger Strickland (202)694-5592 or rogers@econ.ag.gov*

Table 30—Farm Income Statistics

	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998F
						$ billion				
Cash Income statement:										
1. Cash receipts	160.8	169.5	167.9	171.4	177.8	181.2	188.1	199.6	208.7	198.0
Crops[1]	76.9	80.3	82.1	85.7	87.6	93.1	101.1	106.6	112.1	104.7
Livestock	83.9	89.2	85.8	85.6	90.2	88.2	87.0	93.0	96.6	93.4
2. Direct Government payments	10.9	9.3	8.2	9.2	13.4	7.9	7.3	7.3	7.5	12.9
3. Farm-related income[2]	8.6	8.1	8.3	8.2	9.0	9.2	10.1	10.9	11.8	11.8
4. Gross cash income (1+2+3)	180.3	186.9	184.3	188.7	200.2	198.3	205.5	217.8	228.0	222.7
5. Cash expenses[3]	127.5	134.1	134.0	133.6	141.2	147.6	153.6	161.4	167.2	163.6
6. Net cash income (4-5)	52.8	52.8	50.4	55.1	59.0	50.7	51.8	56.4	60.8	59.1
Farm income statement:										
7. Gross cash income (4)	180.3	186.9	184.3	188.7	200.2	198.3	205.5	217.8	228.0	222.7
8. Noncash income[4]	7.9	7.9	7.8	7.6	8.1	9.2	9.8	10.2	10.7	11.3
9. Value of inventory adjustment	3.8	3.3	-0.2	4.2	-4.2	8.3	-5.1	7.8	-0.4	-1.0
10. Gross farm income (7+8+9)	191.9	198.0	191.9	200.5	204.1	215.8	210.1	235.8	238.3	233.1
11. Total production expenses	146.7	153.3	153.3	152.9	160.5	167.5	174.1	182.4	188.4	185.1
12. Net farm income (10-11)	45.3	44.7	38.6	47.5	43.6	48.3	36.0	53.4	49.8	48.0

Values for last 2 years are preliminary or forecasts. Numbers in parentheses indicate the combination of items required to calculate an item. Totals may not add due to rounding. 1. Includes commodities placed under CCC loans and profits made on loans redeemed. 2. Income from custom labor, machine hire, recreational activities, forest product sales, and other farm sources. 3. Excludes depreciation and perquisites to hired labor. Excludes farm operator dwellings. 4. Value of farm products consumed on farms where produced plus the imputed rental value of farm dwellings. *Information contact: Roger Strickland (202) 694-5582 or rogers@econ.ag.gov*

Table 31—Average Income to Farm Operator Households[1]

	1991	1992	1993	1994	1995	1996	1997P	1998F
				$ per farm				
Net cash farm business income[2]	10,678	11,320	11,248	11,389	11,218	13,502	12,460	-
Less depreciation[3]	5,127	5,187	6,219	6,466	6,795	6,906	6,578	-
Less wages paid to operator[4]	441	216	454	425	522	531	513	-
Less farmland rental income[5]	323	360	534	701	769	672	568	-
Less adjusted farm business income due to other household(s)[6]	1,093	961	872	815	649	1,094	*1,429	-
				$ per farm operator household				
Equals adjusted farm business income	3,694	4,596	3,168	2,981	2,484	4,300	3,373	-
Plus wages paid to operator	441	216	454	425	522	531	513	-
Plus net income from farmland rental[7]	323	360	--	--	1,053	1,178	945	-
Equals farm self-employment income	4,458	5,172	3,623	3,407	4,059	6,009	4,831	-
Plus other farm-related earnings[8]	1,352	2,008	1,192	970	661	1,898	1,158	-
Equals earnings of the operator household from farming activities	5,810	7,180	4,815	4,376	4,720	7,906	5,989	5,757
Plus earnings of the operator household from off-farm sources[9]	31,638	35,731	35,408	38,092	39,671	42,455	46,358	45,060
Equals average farm operator household income	37,447	42,911	40,223	42,469	44,392	50,361	52,347	49,623
				$ per U.S. household				
U.S. average household income[10]	37,922	38,840	41,428	43,133	44,938	47,123	49,692	-
				Percent				
Average farm operator household income as percent of U.S. average household income	98.7	110.5	97.1	98.5	98.8	106.9	105.3	-
Average operator household earnings from farming activities as percent of average operator household income	15.5	16.7	12.0	10.3	10.6	15.7	11.4	-

-- = Not available. Values in the last three years preliminary or forecast. 1.This table derives farm operator household income estimates from the Agricultural Resource Management Study (ARMS) that are consistent with Current Population Survey (CPS) methodology. The CPS, conducted by the Bureau of the Census, is the source of official U.S. household income statistics. The CPS defines income to include any income received as cash. The CPS definition departs from a strictly cash concept by including depreciation as an expense that farm operators and other self-employed people subtract from gross receipts when reporting net cash income. 2. A component of farm-sector income. Excludes income of contractors and landlords as well as the income of farms organized as nonfamily corporations or cooperatives, and farms run by a hired manager. Includes income of farms organized as proprietorships, partnerships, and family corporations. 3. Consistent with the CPS definition of self-employed income, reported depreciation expenses are subtracted from net cash farm income. The ARMS collects data on farm business depreciation used for tax purposes. 4. Wages paid to the operator are excluded because they are not shared among other households that have claims on farm business income. These wages are added to the operator householdís adjusted farm business income to obtain farm self-employment income. 5. Gross rental income is excluded because net rental income from farm operation is added below to income received by the household. 6. More than one household may have a claim on the income of a farm business. On average, 1.1 households share the income of a farm business. 7. Includes net rental income from the farm business. Also includes net rental income from farmland held by household members that is not part of the farm business. In 1991 and 1992, gross rental income from the farm business was used because net rental income data were not collected. In 1993 and 1994, net rental income data were collected as part of off-farm income. 8. Wages paid to other operator household members by the farm business, and net income from a farm business other than the one surveyed. In 1996, also includes the value of commodities provided to household members for farm work. 9. Wages, salaries, net income from nonfarm businesses, interest, dividends, transfer payments, etc. In 1993 and 1994, also includes net rental income from farmland. 10. From the CPS. Sources: U.S. Department of Agriculture, Economic Research Service, 1991, 1992, 1993, 1994, and 1995 Farm Costs and Returns Survey (FCRS), and 1996 Agricultural Resource Management Study for farm operator household data. U.S. Department of Commerce, Bureau of the

Table 32—Balance Sheet of the U.S. Farming Sector

	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998F
					$ billion					
Farm assets	814.4	841.5	844.9	870.3	906.4	938.3	981.9	1,033.9	1,088.8	1,129.5
Real estate	600.8	620.0	625.5	642.8	673.7	706.9	755.7	799.5	849.2	895.6
Livestock and poultry[1]	66.2	70.9	68.1	71.0	72.8	67.9	57.8	60.3	66.8	57.0
Machinery and motor vehicles	84.1	86.3	85.9	85.4	86.5	87.5	88.5	88.9	88.1	91.0
Crops stored[2,3]	23.9	23.2	22.2	24.2	23.3	23.3	27.4	31.7	29.9	30.0
Purchased inputs	2.6	2.8	2.6	3.9	3.8	5.0	3.4	4.4	5.1	5.0
Financial assets	36.8	38.3	40.5	43.1	46.3	47.6	49.1	49.1	49.7	50.0
Total farm debt	137.9	138.0	139.2	139.1	142.0	146.8	150.8	156.1	165.4	170.4
Real estate debt[3]	76.0	74.7	74.9	75.4	76.0	77.7	79.3	81.7	85.4	87.6
Non-real estate debt[4]	61.9	63.2	64.3	63.6	65.9	69.1	71.5	74.4	80.1	82.8
Total farm equity	676.6	703.5	705.7	731.3	764.4	791.5	831.1	877.8	923.4	959.1
					Percent					
Selected ratios										
Debt to equity	20.4	19.6	19.7	19.0	18.6	18.5	18.1	17.8	17.9	17.8
Debt to assets	16.9	16.4	16.5	16.0	15.7	15.6	15.4	15.1	15.2	15.1

Values in the last two columns are forecasts. 1. As of December 31. 2. Non-CCC crops held on farms plus value above loan rates for crops held under CCC. 3. Includes CCC storage and drying facilities loans, but excludes debt on operator dwellings. 4. Excludes debt for nonfarm purposes. *Information contact: Ken Erickson (202) 694-5565 or erickson@econ.ag.gov*

Table 33—Cash Receipts from Farming

	Annual			1997	1998					
	1995	1996	1997	Aug	Mar	Apr	May	Jun	Jul	Aug
					$ million					
Commodity sales[1]	188,108	199,580	208,665	16,362	15,821	14,341	13,923	14,719	15,169	15,706
Livestock and products	87,018	93,005	96,568	8,478	8,731	7,467	7,802	8,337	7,774	8,670
Meat animals	44,828	44,414	49,925	4,612	4,852	3,556	3,997	4,411	3,451	4,370
Dairy products	19,894	22,820	20,989	1,666	1,989	1,913	1,903	1,883	1,860	1,991
Poultry and eggs	19,070	22,345	22,183	1,925	1,655	1,781	1,674	1,772	1,903	2,034
Other	3,227	3,425	3,471	275	236	217	228	271	560	275
Crops	101,090	106,575	112,097	7,885	7,090	6,874	6,121	6,382	7,395	7,035
Food grains	10,417	10,741	10,603	967	532	376	362	1,017	1,517	876
Feed crops	24,581	27,265	27,638	1,945	1,768	1,256	1,115	1,355	1,482	1,398
Cotton (lint and seed)	6,851	6,983	6,515	205	285	305	280	184	94	203
Tobacco	2,548	2,796	2,886	380	43	61	0	0	66	430
Oil-bearing crops	15,496	16,362	19,911	781	1,214	879	694	621	777	596
Vegetables and melons	14,913	14,561	15,086	1,676	1,218	1,414	1,550	1,399	1,464	1,574
Fruits and tree nuts	11,119	11,933	12,790	987	616	757	737	914	1,048	1,015
Other	15,165	15,935	16,668	943	1,414	1,826	1,384	891	946	944
Government payments	7,279	7,340	7,496	37	52	75	80	89	167	1,806
Total	195,388	206,919	216,160	16,399	15,873	14,416	14,003	14,808	15,336	17,512

Annual values for the most recent year and monthly values for the current year are preliminary. 1. Sales of farm products include receipts from commodities placed under nonrecourse CCC loans, plus additional gains realized on redemptions during the period. *Information contact: Roger Strickland (202) 694-5592. To receive current monthly cash receipts, contact Larry Traub at (202)694-5593 or ltraub@econ.ag.gov.*

Table 34—Cash Receipts from Farm Marketings, by State

Region and State	Livestock and products				Crops[1]				Total[1]			
	1996	1997	July 1998	Aug 1998	1996	1997	July 1998	Aug 1998	1996	1997	July 1998	Aug 1998
						$ million						
NORTH ATLANTIC												
Maine	262	258	18	20	220	228	16	32	482	486	35	52
New Hampshire	72	69	5	5	97	97	6	12	169	166	11	17
Vermont	433	416	37	39	99	97	16	5	532	513	52	44
Massachusetts	110	102	8	8	392	430	28	35	502	532	36	44
Rhode Island	11	9	1	1	73	74	5	4	84	83	6	5
Connecticut	236	218	17	18	253	279	14	9	489	496	31	27
New York	2,050	1,859	165	176	981	1,037	85	93	3,031	2,896	250	269
New Jersey	196	180	15	15	607	596	72	72	803	776	87	87
Pennsylvania	2,865	2,789	222	262	1,283	1,339	82	94	4,148	4,128	304	357
NORTH CENTRAL												
Ohio	1,943	1,869	157	167	2,853	3,476	240	145	4,796	5,345	397	312
Indiana	1,913	1,896	133	133	3,620	3,610	199	132	5,533	5,506	332	264
Illinois	2,063	1,937	130	158	6,453	7,339	362	285	8,516	9,276	492	443
Michigan	1,450	1,352	106	114	2,154	2,236	173	148	3,604	3,588	280	263
Wisconsin	4,299	4,070	391	421	1,732	1,686	106	122	6,030	5,756	497	543
Minnesota	4,147	4,054	325	363	4,654	4,101	247	224	8,800	8,155	572	586
Iowa	5,451	5,530	317	409	6,698	7,311	439	286	12,148	12,841	756	695
Missouri	2,463	2,795	177	212	2,409	2,768	145	112	4,872	5,564	323	324
North Dakota	539	611	51	59	2,891	2,702	119	159	3,429	3,313	170	218
South Dakota	1,634	1,820	138	155	1,875	2,417	143	132	3,509	4,237	282	287
Nebraska	5,277	5,542	395	484	3,933	4,550	210	150	9,211	10,092	604	633
Kansas	4,541	5,017	326	406	2,978	3,985	526	192	7,519	9,001	852	598
SOUTHERN												
Delaware	573	573	56	57	180	174	16	24	753	748	71	81
Maryland	901	915	84	92	639	623	65	45	1,540	1,538	149	137
Virginia	1,477	1,538	133	152	907	863	80	76	2,384	2,401	213	229
West Virginia	309	324	27	29	79	71	7	8	388	394	34	38
North Carolina	4,431	4,694	323	337	3,466	3,608	192	410	7,897	8,302	514	747
South Carolina	748	797	59	66	869	898	65	100	1,616	1,695	124	166
Georgia	3,279	3,442	307	362	2,452	2,445	128	134	5,731	5,887	435	496
Florida	1,206	1,265	98	116	5,038	4,978	217	192	6,244	6,243	316	309
Kentucky	1,727	1,978	402	136	1,842	1,655	50	31	3,569	3,633	453	166
Tennessee	999	1,005	82	96	1,406	1,287	50	51	2,405	2,292	132	147
Alabama	2,362	2,431	202	229	808	796	40	24	3,170	3,227	242	253
Mississippi	1,934	2,006	167	192	1,504	1,470	45	36	3,438	3,476	213	229
Arkansas	3,374	3,416	289	322	2,470	2,446	108	77	5,844	5,862	397	399
Louisiana	688	659	53	58	1,641	1,481	41	54	2,328	2,140	94	113
Oklahoma	2,414	3,061	246	316	1,105	1,308	171	107	3,519	4,369	417	423
Texas	7,821	8,184	581	721	5,139	5,277	417	488	12,960	13,461	998	1,209
WESTERN												
Montana	797	991	76	161	1,203	1,072	51	71	1,999	2,063	127	231
Idaho	1,330	1,389	148	173	2,043	1,926	78	119	3,372	3,315	226	292
Wyoming	478	646	70	62	189	199	8	22	667	845	78	84
Colorado	2,763	3,012	230	235	1,362	1,388	132	122	4,125	4,399	362	357
New Mexico	1,198	1,354	130	143	506	562	77	55	1,704	1,915	207	198
Arizona	840	888	56	48	1,306	1,257	61	52	2,145	2,145	117	100
Utah	644	715	63	59	228	238	21	19	872	953	84	78
Nevada	154	180	12	17	132	130	18	16	287	310	30	32
Washington	1,665	1,604	135	153	3,833	3,778	295	367	5,497	5,382	430	520
Oregon	658	740	74	83	2,246	2,373	208	256	2,904	3,113	282	339
California	6,212	6,294	532	622	17,285	18,995	1,481	1,596	23,497	25,289	2,012	2,218
Alaska	6	6	1	1	23	26	3	3	29	32	3	3
Hawaii	66	68	6	6	420	415	36	37	487	483	41	42
U.S.	93,005	96,568	7,774	8,670	106,575	112,097	7,395	7,035	199,580	208,665	15,169	15,706

Estimates as of end of current month. Totals may not add because of rounding. 1. Sales of farm products include receipts from commodities placed under nonrecourse CCC loans, plus additional gains realizd on redemptions during the period. *Information contact: Roger Strickland (202) 694-5592. To receive current monthly cash receipts contact Larry Traub at (202) 694-5593 or ltraub@econ.ag.gov*

Table 35—CCC Net Outlays by Commodity & Function

	Fiscal year									
	1990	1991	1992	1993	1994	1995	1996	1997	1998 E	1999 E
					$ million					
COMMODITY/PROGRAM										
Feed grains:										
Corn	2,435	2,387	2,105	5,143	625	2,090	2,021	2,587	2,649	2,604
Grain sorghum	349	243	190	410	130	153	261	284	285	280
Barley	-94	71	174	186	202	129	114	109	152	114
Oats	-5	12	32	16	5	19	8	8	9	8
Corn and oat products	8	9	9	10	10	1	0	0	0	0
Total feed grains	2,693	2,722	2,510	5,765	972	2,392	2,404	2,988	3,095	3,006
Wheat and products	796	2,805	1,719	2,185	1,729	803	1,491	1,332	1,587	1,486
Rice	667	867	715	887	836	814	499	459	515	471
Upland cotton	-79	382	1,443	2,239	1,539	99	685	561	1,065	957
Tobacco	-307	-143	29	235	693	-298	-496	-156	286	-49
Dairy	505	839	232	253	158	4	-98	67	224	113
Soybeans	5	40	-29	109	-183	77	-65	5	11	222
Peanuts	1	48	41	-13	37	120	100	6	0	-1
Sugar	15	-20	-19	-35	-24	-3	-63	-34	-39	-39
Honey	47	19	17	22	0	-9	-14	-2	0	0
Wool	104	172	191	179	211	108	55	0	0	0
Operating expense[1]	618	625	6	6	6	6	6	6	5	6
Interest expenditure	632	745	532	129	-17	-1	140	-111	-109	-42
Export programs[2]	-34	733	1,459	2,193	1,950	1,361	-422	125	329	530
1988/96 Disaster/tree/ livestock assistance	161[3]	121	1,054	944	2,566	660	95	130	25	5
Conservation reserve program	0	0	0	0	0	0	2	1,671	1,829	1,639
Other conservation programs	0	0	0	0	0	0	7	105	291	340
Other	647	155	-162	949	-137	-103	320	104	209	426
Total	6,471	10,110	9,738	16,047	10,336	6,030	4,646	7,256	9,323	9,070
Function										
Price support loans (net)	-399	418	584	2,065	527	-119	-951	110	444	115
Cash direct payments:[4]										
Production flexibility contract	0	0	0	0	0	0	5,141	6,320	5,716	5,512
Deficiency	4,178	6,224	5,491	8,607	4,391	4,008	567	-1,118	-11	0
Diversion	0	0	0	0	0	0	0	0	0	0
Dairy termination	189	96	2	0	0	0	0	0	0	0
Loan Deficiency	3	21	214	387	495	29	0	0	6	103
Other	0	0	140	149	171	97	95	7	360	335
Disaster	0	0	0	0	0	0	0	0	0	0
Conservation reserve program	0	0	0	0	0	0	2	1,671	1,829	1,639
Other conservation programs	0	0	0	0	0	0	0	85	238	298
Non-Insured Assistance (NAP)	0	0	0	0	0	0	2	52	54	77
Total direct payments	4,370	6,341	5,847	9,143	5,057	4,134	5,807	7,017	8,192	7,964
1988-94 crop disaster	5[3]	6	960	872	2,461	584	14	2	0	0
Emergency livestock/tree/DRAP livestock indemn/forage assist.	156	115	94	72	105	76	81	128	25	5
Purchases (net)	-48	646	321	525	293	-51	-249	-60	145	72
Producer storage payments	185	1	14	9	12	23	0	0	0	0
Processing, storage, and transportation	278	240	185	136	112	72	51	33	32	30
Operating expense[1]	618	625	6	6	6	6	6	6	5	6
Interest expenditure	632	745	532	129	-17	-1	140	-111	-109	-42
Export programs[2]	-34	733	1,459	2,193	1,950	1,361	-422	125	329	530
Other	708	240	-264	897	-170	-55	169	6	260	390
Total	6,471	10,110	9,738	16,047	10,336	6,030	4,646	7,256	9,323	9,070

1. Does not include CCC Transfers to General Sales Manager. 2. Includes Export Guarantee Program, Direct Export Credit Program, CCC Transfers to the General Sales Manager, Market Access (Promotion) Program, starting in FY 1991 and starting in FY 1992 the Export Guarantee Program - Credit Reform, Export Enhancement Program, Dairy Export Incentive Program, and Technical Assistance to Emerging Markets. 3. Approximately $1.5 billion in benefits to farmers under the Disaster Assistance Act of 1989 were paid in generic certificates and were not recorded directly as disaster assistance outlays. 4. Includes cash payments only. Excludes generic certificates in FY 86-96. E=Estimated in the FY 1999 Mid-Session Review Budget which was released on May 26, 1998 based on April 1998 supply and demand estimates. The CCC outlays shown for 1996-1999 include the impact of the Federal Agricultural Improvement and Reform Act of 1996, which was enacted April 4, 1996. Minus (-) indicates a net receipt (excess of repayments or other receipts over gross outlays of funds). *Information contact: Richard Pazdalski Farm Sevice Agency - Budget at (202) 720-3675 or Richard_Pazdalski@wdc.fsa.usda.gov.*

Food Expenditures

Table 36—Food Expenditures

	Annual			1998			Year-to-date cumulative		
	1995	1996	1997 P	Aug	Sept P	Oct P	Aug	Sept P	Oct P
				$ billion					
Sales[1]									
At home[2]	354.2	367.6	380.2	33.6	28.9	30.1	258.9	287.8	317.9
Away from home[3]	280.8	288.5	297.9	25.6	24.7	27.6	199.7	224.4	252.0
				1995 $ billion					
Sales[1]									
At home[2]	367.3	367.4	371.0	32.1	27.7	28.6	248.7	276.4	304.9
Away from home[3]	287.7	288.5	289.7	24.2	23.3	26.0	190.1	213.4	239.4
				Percent change from year earlier ($ billion)					
Sales[1]									
At home[2]	3.8	3.8	3.4	2.8	-4.8	-6.8	3.7	2.8	1.8
Away from home[3]	4.5	2.7	3.0	-4.0	1.1	9.5	0.1	0.2	1.1
				Percent change from year earlier (1995 $ billion)					
Sales[1]									
At home[2]	0.5	0.1	1.0	0.9	-6.4	-8.8	1.9	1.0	0.0
Away from home[3]	2.2	0.3	0.2	-6.5	-1.6	6.7	-2.5	-2.4	-1.5

R = Revised. P = Preliminary. 1. Food only (excludes alcoholic beverages). Not seasonally adjusted. 2. Excludes donations and home production. 3. Excludes donations, child nutrition subsidies, and meals furnished to employees, patients, and inmates. *Information contact: Annette Clauson (202) 694-5373*

Note: This table differs from Personal Consumption Expenditures (PCE), table 2, for several reasons: (1) this series includes only food, excluding alcoholic beverages and pet food which are included in PCE; (2) this series is not seasonally adjusted, whereas PCE is seasonally adjusted at annual rates; (3) this series reports sales only, but PCE includes food produced and consumed on farms and food furnished to employees; (4) this series includes all sales of meals and snacks, while PCE includes only purchases using personal funds, excluding business travel and entertainment. For a more complete discussion of the differences, see "Developing an Integrated Information System for the Food Sector," ERS Agr. Econ. Rpt. No. 575, Aug. 1987.

Transportation

Table 37—Rail Rates; Grain & Fruit-Vegetable Shipments

	Annual			1997	1998					
	1995	1996	1997 R	Sep	Apr	May R	Jun	Jul	Aug R	Sep
Rail freight rate index[1] (Dec. 1984=100)										
All products	111.7	111.5	112.1	112.5	113.4	113.5	113.6	113.6	113.6	113.7
Farm products	115.6	115.9	120.3	121.1	124.7	124.7	124.7	124.7	124.7	124.7
Grain[2]	117.1	118.0	--	--	--	--	--	--	--	--
Food products	111.7	108.8	107.6	108.4	108.3	108.3	108.2	108.1	106.5	106.5
Barge freight rate index[1] (Dec 1990=100)										
Grain	172.6	129.5	107.1	113.3	93.0	86.9	94.5	--	--	--
Grain shipments										
Rail carloadings (1,000 cars)[3]	28.9	25.2	23.2	20.6	20.4	20.4	20.7	21.4	22.3	21.7
Barge shipments (mil. ton)[4,5]	3.5	3.1	2.4	2.2	--	--	--	--	--	--
Fresh fruit and vegetable shipments[6]										
Piggy back (mil. cwt)	1.3	1.1	1.1	0.9	0.9	1.3	1.1	0.8	0.7	0.9
Rail (mil. cwt)	1.9	1.6	1.7	0.9	1.2	1.1	1.5	1.5	0.4	0.8
Truck (mil. cwt)	40.5	35.7	42.6	36.2	44.5	50.3	51.7	42.2	39.6	36.2
Cost of operating trucks hauling produce[6]										
Fleet operation (¢/mile)	130.3	123.0	135.4	134.9	--	--	--	--	--	--

P= Preliminary. R = Revised. -- = Not available. 1. Department of Labor, Bureau of Labor Statistics. 2. Discontinued. 3. Weekly average; from Association of American Railroads. 4. Shipments on Illinois and Mississippi waterways, U.S. Corps of Engineers. 5. Annual 1996 is 7-month average. 6. Agricultural Marketing Service, USDA. *Information contact: Jenny Gonzales (202) 694-5296*

Indicators of Farm Productivity

Table 38—Indexes of Farm Production, Input Use, & Productivity[1]

	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
						1992=100				
Farm output	88	83	89	94	94	100	94	107	101	106
All livestock products	92	93	94	95	98	100	100	108	110	109
Meat animals	95	97	97	96	99	100	100	102	103	100
Dairy products	94	96	95	98	98	100	99	114	115	115
Poultry and eggs	81	83	86	92	96	100	104	110	114	119
All crops	86	75	86	92	92	100	90	106	96	103
Feed crops	84	62	85	88	86	100	76	102	83	98
Food crops	84	76	83	107	82	100	96	97	90	93
Oil crops	88	72	88	87	94	100	85	115	99	107
Sugar	95	91	91	92	96	100	95	106	98	94
Cotton and cottonseed	92	96	75	96	109	100	100	122	110	117
Vegetables and melons	90	81	85	93	97	100	97	113	108	112
Fruit and nuts	95	102	98	97	96	100	107	111	102	102
Farm input[1]	101	100	100	101	102	100	101	102	101	100
Farm labor	101	103	104	102	106	100	96	96	92	100
Farm real estate	100	100	102	101	100	100	98	99	98	99
Durable equipment	120	113	108	105	103	100	97	94	92	89
Energy	102	102	101	100	101	100	100	103	109	104
Fertilizer	106	97	94	97	98	100	111	109	85	89
Pesticides	92	79	93	90	100	100	97	103	94	106
Feed, seed, and purchased livestock	97	96	91	99	99	100	101	102	109	95
Inventories	102	98	93	97	100	100	104	99	108	104
Farm output per unit of input	87	83	90	93	92	100	94	105	100	106
Output per unit of labor										
Farm[2]	87	81	86	92	89	100	98	111	110	106
Nonfarm[3]	95	95	96	96	97	100	100	101	--	--

Values for latest year preliminary. 1. Includes miscellaneous items not shown separately. 2. Source: Economic Research Service. 3. Source: Bureau of Labor Statistics. *Information contact: John Jones (202) 694-5614*

Food Supply & Use

Table 39—Per Capita Consumption of Major Food Commodities[1]

Commodity	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
					Lbs.					
Red meats[2,3,4]	119.5	115.9	112.3	111.9	114.1	112.2	114.8	115.1	112.8	111.0
Beef	68.6	65.4	63.9	63.1	62.8	61.5	63.6	64.4	65.0	63.8
Veal	1.1	1.0	0.9	0.8	0.8	0.8	0.8	0.8	1.0	0.9
Lamb & mutton	1.0	1.0	1.0	1.0	1.0	1.0	0.9	0.9	0.8	0.8
Pork	48.8	48.4	46.4	46.9	49.5	48.9	49.6	49.0	45.9	45.6
Poultry[2,3,4]	51.9	53.9	56.3	58.3	60.8	62.5	63.3	62.9	64.4	64.8
Chicken	39.6	40.9	42.4	44.2	46.7	48.5	49.3	48.8	49.8	50.9
Turkey	12.4	13.1	13.8	14.1	14.1	14.0	14.1	14.1	14.6	13.9
Fish and shellfish[3]	15.1	15.6	15.0	14.8	14.7	14.9	15.1	14.9	14.7	14.5
Eggs[4]	31.8	30.5	30.2	30.1	30.3	30.4	30.6	30.2	30.5	30.7
Dairy products										
Cheese (excluding cottage)[2,5]	23.7	23.8	24.6	25.0	26.0	26.2	26.8	27.3	27.7	28.0
American	11.5	11.0	11.1	11.1	11.3	11.4	11.5	11.8	12.0	12.0
Italian	8.1	8.5	9.0	9.4	10.0	9.8	10.3	10.4	10.8	11.0
Other cheeses[6]	4.1	4.3	4.5	4.6	4.7	5.0	5.0	5.0	5.0	5.1
Cottage cheese	3.9	3.6	3.4	3.3	3.1	2.9	2.8	2.7	2.6	2.7
Beverage milks[2]	222.3	224.2	221.8	221.2	218.3	213.4	213.5	209.7	210.0	206.9
Fluid whole milk[7]	105.7	97.5	90.4	87.3	84.0	80.1	78.8	75.3	74.6	72.7
Fluid lowfat milk[8]	100.5	106.5	108.4	109.9	109.3	106.5	105.9	102.5	101.7	99.8
Fluid skim milk	16.1	20.2	22.9	23.9	25.0	26.7	28.7	31.9	33.7	34.4
Fluid cream products[9]	7.6	7.8	7.6	7.7	8.0	8.0	8.1	8.4	8.7	9.1
Yogurt (excluding frozen)	4.5	4.2	4.0	4.2	4.2	4.3	4.7	5.1	4.8	5.1
Ice cream	17.3	16.1	15.8	16.3	16.3	16.1	16.1	15.7	15.9	16.2
Ice milk	8.0	8.4	7.7	7.4	7.1	6.9	7.6	7.5	7.6	7.9
Frozen yogurt	--	2.0	2.8	3.5	3.1	3.5	3.5	3.5	2.6	2.1
All dairy products, milk equivalent, milkfat basis[10]	582.5	563.8	568.4	565.6	565.9	574.1	586.0	584.4	575.5	579.8
Fats and oils--total fat content	63.6	60.8	62.8	65.4	67.4	70.2	68.6	66.9	65.4	67.4
Butter and margarine (product weight)	14.8	14.6	15.3	15.0	15.4	15.8	14.7	13.7	13.5	12.8
Shortening	21.5	21.5	22.2	22.4	22.4	25.1	24.1	22.5	22.3	20.9
Lard and edible tallow (direct use)	2.6	2.1	2.4	3.1	4.1	3.9	4.7	4.9	5.3	4.7
Salad and cooking oils	26.3	24.4	24.8	26.7	27.2	26.8	26.3	26.9	26.1	28.7
Fresh fruits[11]	120.9	122.8	116.3	113.0	123.5	124.9	126.5	124.6	129.0	133.2
Canned fruit[12]	18.5	19.0	18.4	17.1	19.8	18.0	18.3	14.9	16.4	18.0
Dried fruit	3.3	3.3	3.1	3.0	2.8	3.0	3.0	2.8	2.8	2.7
Frozen fruit	3.4	3.7	3.5	3.5	3.8	3.4	2.9	4.2	3.9	3.2
Selected fruit juices[13]	68.3	70.5	66.2	66.6	63.6	74.9	71.6	75.6	75.3	75.2
Vegetables[11]										
Fresh	167.4	172.2	167.2	167.2	171.1	171.9	177.4	175.1	181.8	185.6
Canning	94.8	102.4	110.7	113.3	111.6	112.1	107.8	110.2	108.5	105.9
Freezing	64.2	67.6	66.8	72.7	70.8	75.1	79.5	79.9	83.9	81.5
Dehydrated and chips	27.5	28.2	29.0	31.2	30.1	31.0	30.7	30.0	33.1	33.6
Pulses	7.5	6.3	7.1	7.8	8.2	7.7	8.5	8.5	8.0	8.5
Peanuts (shelled)	6.9	7.0	6.0	6.5	6.2	6.0	5.8	5.7	5.7	5.8
Tree nuts (shelled)	2.3	2.2	2.4	2.2	2.2	2.2	2.3	1.9	2.0	2.2
Flour and cereal products[14]	175.5	174.5	182.0	183.6	186.2	191.0	194.1	192.5	198.4	200.1
Wheat flour	131.7	129.6	136.0	136.9	138.8	143.3	144.5	141.8	148.8	149.7
Rice (milled basis)	14.3	15.2	16.2	16.8	17.5	17.6	19.3	20.1	18.9	19.5
Caloric sweeteners[15]	132.7	133.1	137.0	138.0	141.2	144.4	147.4	149.9	150.3	--
Coffee (green bean equiv.)	9.8	10.1	10.3	10.3	10.0	9.1	8.2	8.0	8.9	9.3
Cocoa (chocolate liquor equiv.)	3.8	4.0	4.3	4.6	4.6	4.3	3.9	3.6	4.2	4.1

-- = Not available. 1. In pounds, retail weight unless otherwise stated. Consumption normally represents total supply minus exports, nonfood use, and ending stocks. Calendar-year data, except fresh citrus fruits, peanuts, tree nuts, and rice, which are on crop-year basis. 2. Totals may not add due to rounding. 3. Boneless, trimmed weight. Chicken series revised to exclude amount of ready-to-cook chicken going to pet food as well as some water leakage that occurs when chicken is cut up before packaging. 4. Excludes shipments to the U.S. territories. 5. Whole and part-skim milk cheese. Natural equivalent of cheese and cheese products. 6. Includes Swiss, Brick, Muenster, cream, Neufchatel, Blue, Gorgonzola, Edam, and Gouda. 7. Plain and flavored. 8. Plain and flavored, and buttermilk. 9. Heavy cream, light cream, half and half, eggnog, sour cream, and dip. 10. Includes condensed and evaporated milk and dry milk products. 11. Farm weight. 12. Excludes pineapples and berries. 13. Single strength equivalent. 14. Includes rye, corn, oat, and barley products. Excludes quantities used in alcoholic beverages, corn sweeteners, and fuel. 15. Dry weight equivalent.

Information contact: Jane E. Allshouse (202) 694-5449

75th Agricultural Outlook Forum

February 22 - 23, 1999
Washington, DC

Program

Monday, February 22

Morning General Sessions

Opening Address
Dan Glickman, Secretary of Agriculture

Keynote Speaker *(to be announced)*

10:00-10:45 a.m.
Agricultural and Trade Prospects
Keith Collins, Chief Economist, USDA
August Schumacher, Under Secretary for Farm and Foreign Agricultural Services, USDA

11:00 am-12:30 p.m.
Marketing Strategies in the New Millennium
Moderator: ***Ken Root, Host AgriTalk Radio***

Afternoon Breakout Sessions

2:00-3:30 p.m.–concurrent

Farm Income and Finance Outlook
Business practices to improve bottom lines; farm credit conditions; the dynamics of income, debt management, and financial performance

Price Discovery—2000 and Beyond
Determining fair prices in an environment of vertical integration, new production arrangements, and genetically tailored crops.

New Approaches to Direct Marketing by Farmers
The farmer as producer/marketer; direct marketing to communities, restaurants; monitoring the changing preferences of consumers

Implications of Dietary Guidelines
Factors in consumer demand for food; how the guidelines affect food production, processing, and marketing

3:45-5:15 p.m.–concurrent

The Future of Agricultural Risk Management Tools
What's ahead in agricultural commodity futures, options, and derivatives; agricultural insurance products for the next century; bundling risk management products

USDA Statistics—The Census and Beyond
Enhancements to the 1997 Census of Agriculture and the results; planning the statistics program of the future

The Role of New-Generation Cooperatives
Adding value to crops through cooperatively-owned farms, and a look at the strategies of two cooperatives

Emerging Markets in 21st Century Nutrition Programs
New outlets for farm products in nutrition programs; creative use of USDA's bonus commodities; expanding WIC farmers' markets

Forum Dinner–6:00 p.m.
With featured speaker

Tuesday, February 23

Morning Outlook and Breakout Sessions

8:00-9:30 a.m.–concurrent

Outlook: Grains and Oilseeds
Cotton (including an official from China)

Fruits and Vegetables: New Business Strategies
How growers and processors are adapting to slower export growth and supply pressures in a competitive market

Risk Management and Environmental Improvement
Using markets and risk management tools to increase adoption of conservation practices; the role of crop insurance

10:00-11:30 a.m.–concurrent

Setting the Stage for New Trade Negotiations
Agricultural issues for trade talks ahead—FTAA, APEC, and the WTO mini-round; perspectives of industry and U.S. and foreign officials

Outlook for Emerging Technologies in the Sugar Industry
Advances in breeding and genetic engineering of sugar beets; cutting-edge changes in processing

Competition from Latin America
Latin America as a market, its infrastructure improvements, evolution of agricultural production, and adoption of biotechnology

Farmland Protection—Building on Past Successes
Overview of national trends and policies by the American Farmland Trust President; making farmland protection work at the local level

Livestock and Poultry Outlook for North America

Briefing on the Retail Food Price Outlook

Noon Luncheons

Livestock; Cotton; Sweeteners; Grains and Oilseeds
Featured speaker at each luncheon

Afternoon Outlook and Breakout Sessions

1:45-3:45 p.m. concurrent

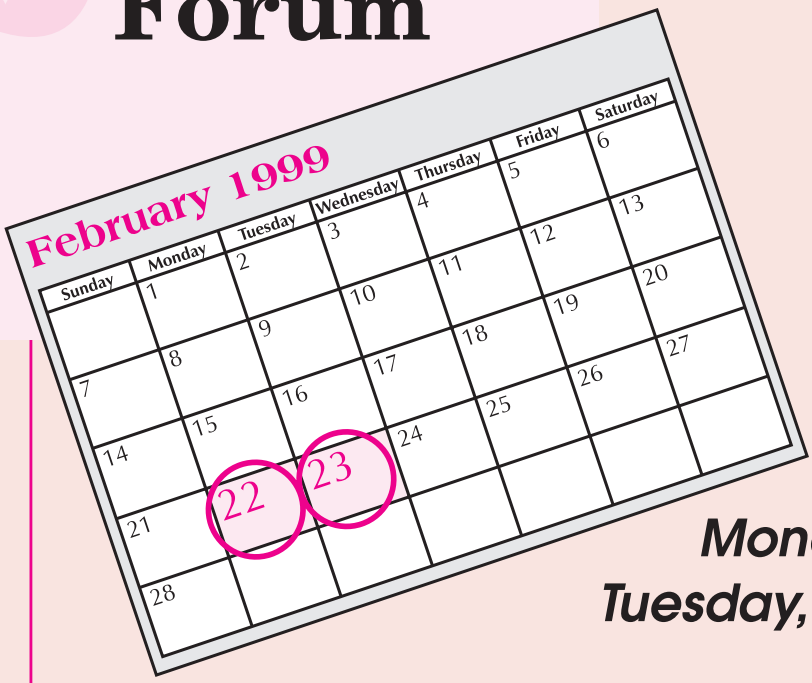
Outlook: Dairy
Tobacco (including recent settlement developments)

Prospects for China: Importer or Competitor?
The future of Chinese agriculture, and viewpoints of China's Ministry of Agriculture and State Statistical Bureau

Food, Agriculture, and the Biotechnology Revolution
An overview of agricultural biotechnology, an industry perspective, and the public policy issues in biotechnology advances

Precision Agriculture in the 21st Century
Environmental implications of precision agriculture, and farmer and industry perspectives

75th Agricultural Outlook Forum



Monday, February 22 -
Tuesday, February 23, 1999

Marriott Crystal Gateway Hotel
Arlington, Virginia

- Assessments of farm prospects by government and industry analysts
- Focus sessions on major farm-sector issues in the 21st century
- Long-term commodity projections to the year 2008

For details on program and registration

On the Web at www.usda.gov/oce/waob/agforum.htm/
By e-mail to agforum@oce.usda.gov
By phone at (202) 314-3462
Or write Outlook Forum '99, Room 5143-South Bldg., USDA,
Washington, DC 20250-3812